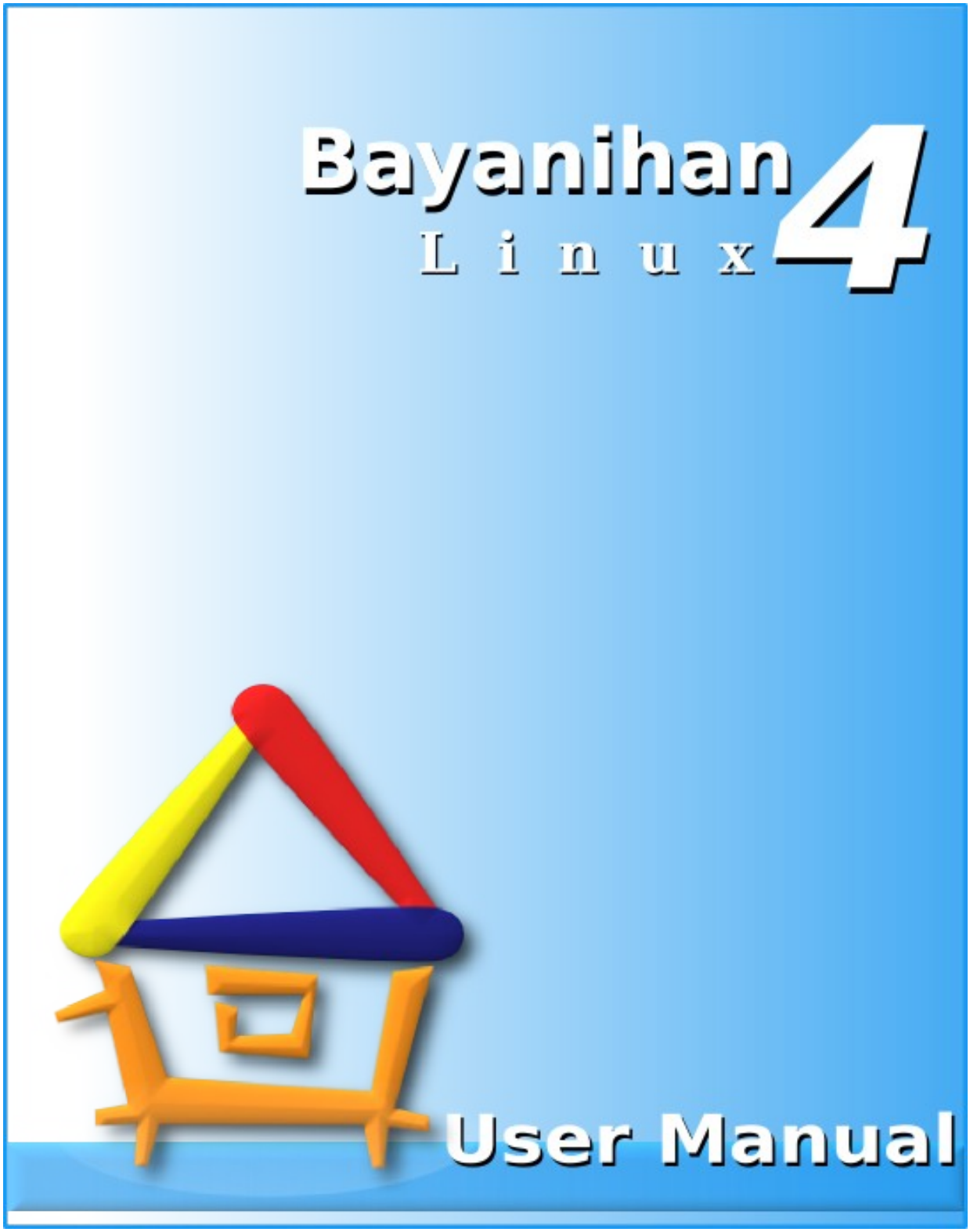
Bayanihan
Linux
4
User Manual

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CHAPTER 1 - Introduction

About Bayanihan Linux

The Bayanihan Linux project started on October 2001 by the Open Source Group of the Advanced Science and Technology Institute. This project aims to provide a cost effective desktop solution to expensive and restrictive proprietary operating systems. Bayanihan Linux is tailor-made for small and medium business enterprises, government agencies and schools.

The first version of Bayanihan Linux was released last June 13, 2002. It was followed by the second version which was released on January 31, 2003.

In the development of the third version, beta versions were released to the public to obtain feedback before releasing the final version. The third version was released on February 2004.

Beta versions and release candidates were released prior to the final version of Bayanihan Linux 4. The fourth version of Bayanihan Linux was released on June 2006.

Recommended System Requirements

Pentium II or equivalent
128MB RAM
4.3GB hard disk space
VGA or higher resolution(at least 800x600)
Standard keyboard, mouse and monitor

System Features

Based on Debian
Graphical Desktop
Office and other productivity suite
Internet Ready
Multimedia Playback
Educational Applications
Image Editing Tools
Improved support for removable devices (USB)
Easy to update and upgrade

CHAPTER 2 - Installation

Installation

1. Configure the BIOS to boot from the CD-ROM.

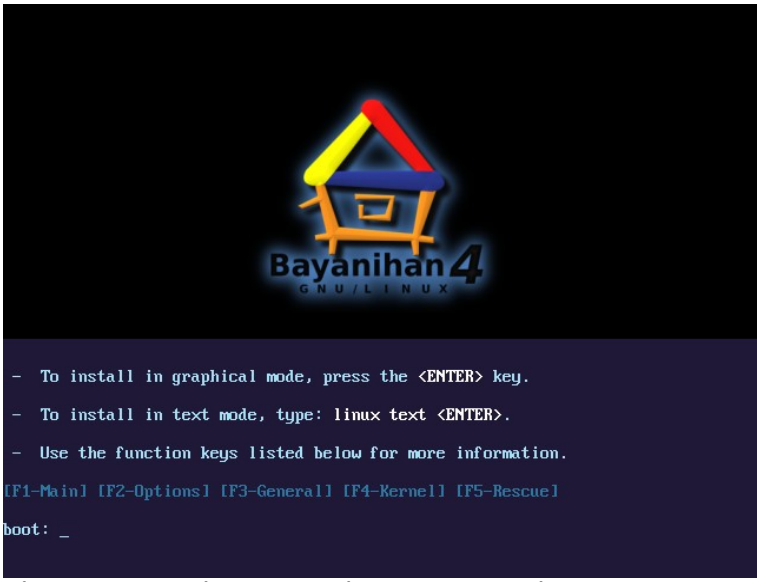

Bayanihan 4
GNU/LINUX
- To install in graphical mode, press the <ENTER> key.
- To install in text mode, type: linux text <ENTER>.
- Use the function keys listed below for more information.
[F1-Main] [F2-Options] [F3-General] [F4-Kernel] [F5-Rescue]
boot: _

Figure 1 - Booting From The CD-ROM Drive

2. Insert the Bayanihan Linux CD in the CD-ROM drive and restart the computer. The installation process will start and the user will be presented with the "Welcome" screen as seen in Figure 2.

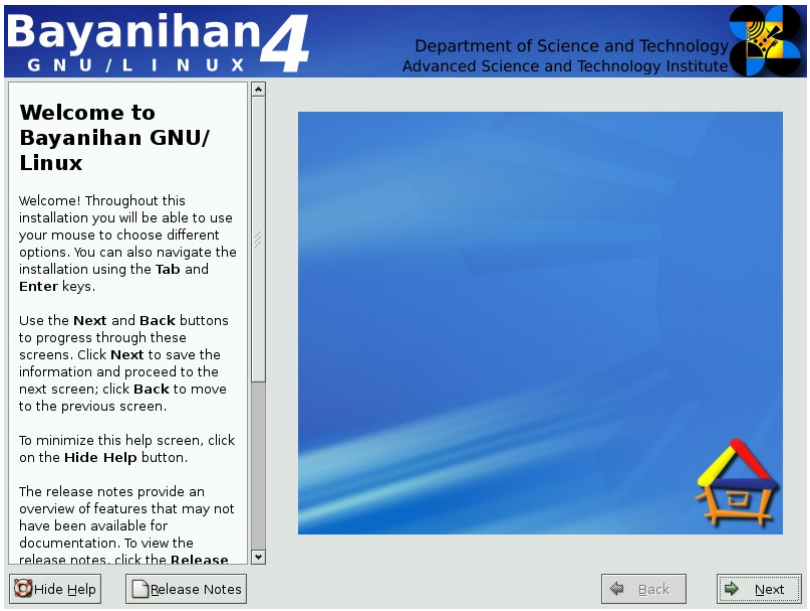

Bayanihan 4
GNU/LINUX
Department of Science and Technology
Advanced Science and Technology Institute
Welcome to Bayanihan GNU/ Linux
Welcome! Throughout this installation you will be able to use your mouse to choose different options. You can also navigate the installation using the Tab and Enter keys.
Use the Next and Back buttons to progress through these screens. Click Next to save the information and proceed to the next screen; click Back to move to the previous screen.
To minimize this help screen, click on the Hide Help button.
The release notes provide an overview of features that may not have been available for documentation. To view the
Hide Help
Release Notes
Back
Next

Figure 2 - Installer Welcome Screen

3. The next two screens will let the user select the language that will be used throughout the installation process and the layout of the keyboard.

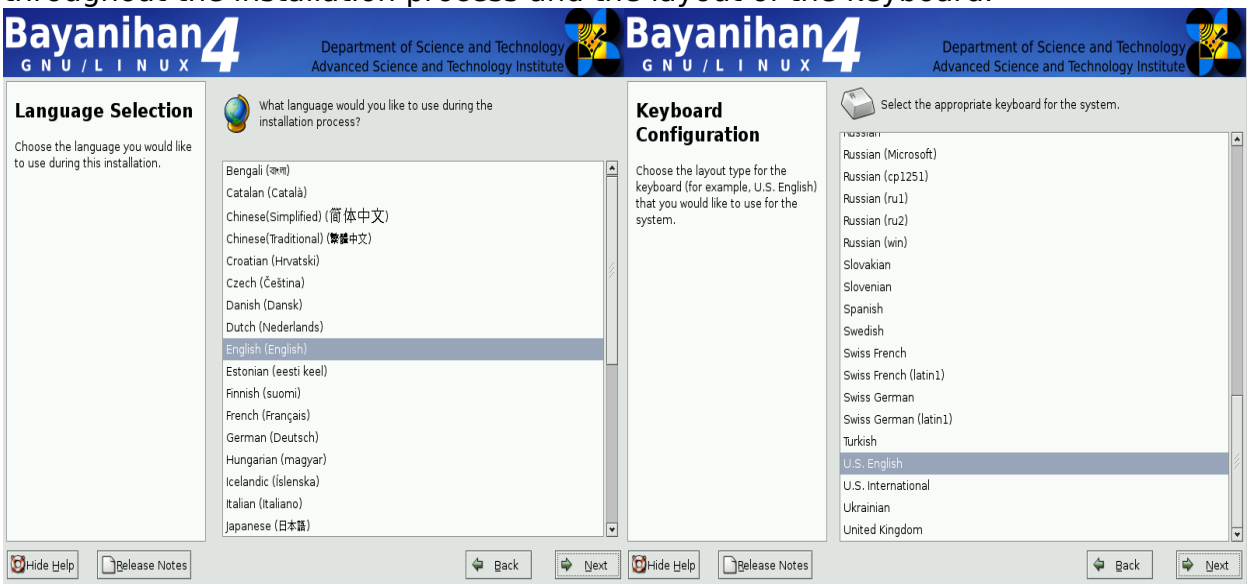
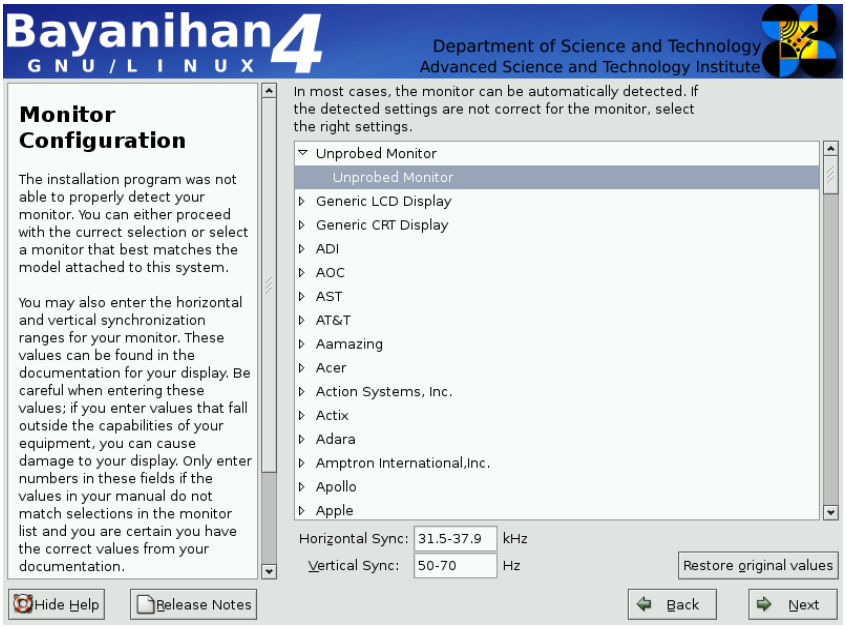


Figure 3 - Language Selection and Keyboard Configuration

4. The next step is to specify the type of monitor you are using. Usually, the monitor is automatically detected. If not, supply the appropriate frequency settings for your monitor. Frequency settings can be found in the product specifications of the monitor's manual or website.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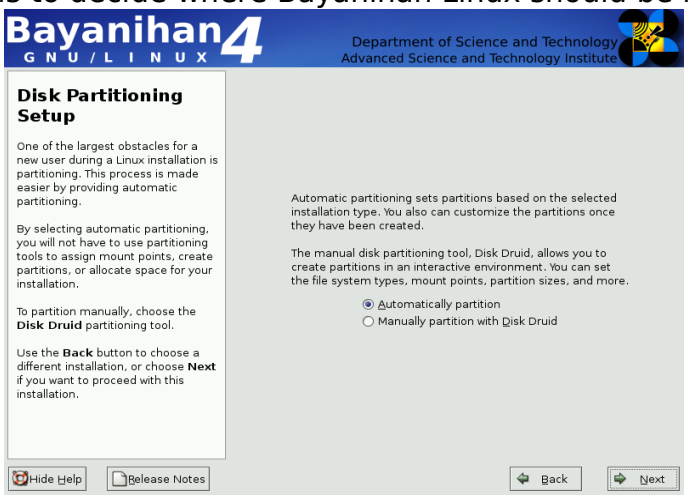
Advanced Science and Technology Institute
Monitor Configuration
The installation program was not able to properly detect your monitor. You can either proceed with the currect selection or select a monitor that best matches the model attached to this system.
You may also enter the horizontal and vertical synchronization ranges for your monitor. These values can be found in the documentation for your display. Be careful when entering these values; if you enter values that fall outside the capabilities of your equipment, you can cause damage to your display. Only enter numbers in these fields if the values in your manual do not match selections in the monitor list and you are certain you have the correct values from your documentation.
In most cases, the monitor can be automatically detected. If the detected settings are not correct for the monitor, select the right settings.
Unprobed Monitor
Unprobed Monitor
Generic LCD Display
Generic CRT Display
ADI
AOC
AST
AT&T
Aamazing
Acer
Action Systems, Inc.
Actix
Adara
Amptron International,Inc.
Apollo
Apple
Horizontal Sync: 31.5-37.9 kHz
Vertical Sync: 50-70 Hz
Restore original values
Hide Help
Release Notes
Back
Next

Figure 4 - Monitor Configuration

5. The next step is to decide where Bayanihan Linux should be installed.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Disk Partitioning Setup
One of the largest obstacles for a new user during a Linux installation is partitioning. This process is made easier by providing automatic partitioning.
By selecting automatic partitioning, you will not have to use partitioning tools to assign mount points, create partitions, or allocate space for your installation.
To partition manually, choose the Disk Druid partitioning tool.
Use the Back button to choose a different installation, or choose Next if you want to proceed with this installation.
Automatic partitioning sets partitions based on the selected installation type. You also can customize the partitions once they have been created.
The manual disk partitioning tool, Disk Druid, allows you to create partitions in an interactive environment. You can set the file system types, mount points, partition sizes, and more.
Automatically partition
Manually partition with Disk Druid
Hide Help
Release Notes
Back
Next

Figure 5 - Disk Partitioning

You have two choices:

(a)Automatically partition

i. Automatic partitioning simplifies the task by automating the allocation of disk space for Bayanihan Linux by providing three common options:

A.Remove all Linux partitions on this system

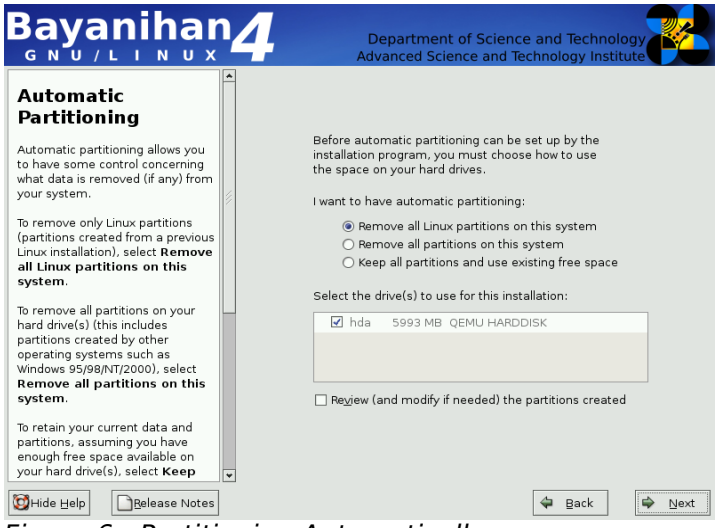
- The disk space used by installed linux operating systems in your hard disk will be erased and allocated to Bayanihan Linux. Existing Windows partitions will not be erased.

B.Remove all partitions on this system

- The entire hard disk will be erased and allocated to Bayanihan Linux.

C.Keep all partitions and use exisiting free space

- Unused free partitions in your hard disk will be allocated to Bayanihan Linux.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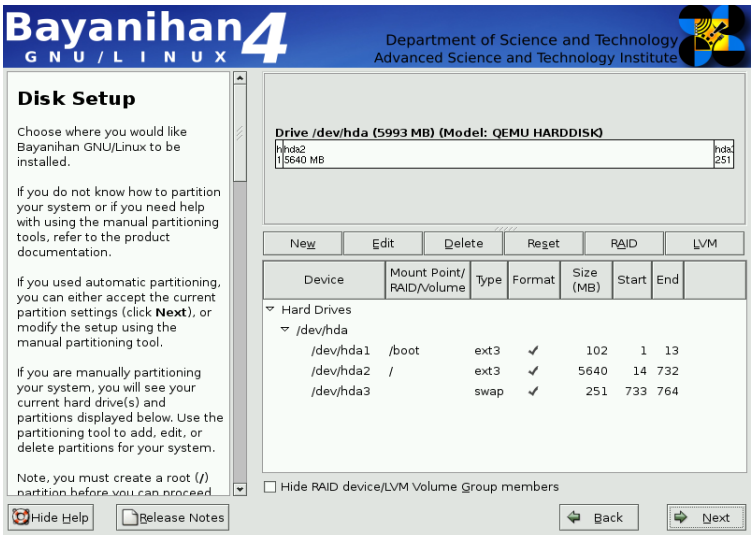
Automatic Partitioning
Automatic partitioning allows you to have some control concerning what data is removed (if any) from your system.
To remove only Linux partitions (partitions created from a previous Linux installation), select Remove all Linux partitions on this system.
To remove all partitions on your hard drive(s) (this includes partitions created by other operating systems such as Windows 95/98/NT/2000), select Remove all partitions on this system.
To retain your current data and partitions, assuming you have enough free space available on your hard drive(s), select Keep
Before automatic partitioning can be set up by the installation program, you must choose how to use the space on your hard drives.
I want to have automatic partitioning:
Remove all Linux partitions on this system
Remove all partitions on this system
Keep all partitions and use existing free space
Select the drive(s) to use for this installation:
hda 5993 MB QEMU HARDDISK
Review (and modify if needed) the partitions created
Hide Help
Release Notes
Back
Next

Figure 6 - Partitioning Automatically

(b)Manually partition with Disk Druid

If you elect to manually partition your hard disk, the following are the minimum partition requirements:

Mount Point	***Filesystem Type***	***Recommended Size(MB)***
/boot	ext3	100MB
no mount point	swap 1.	2 x RAM (eg. SWAP=2 x 128MB)
/	ext	4000MB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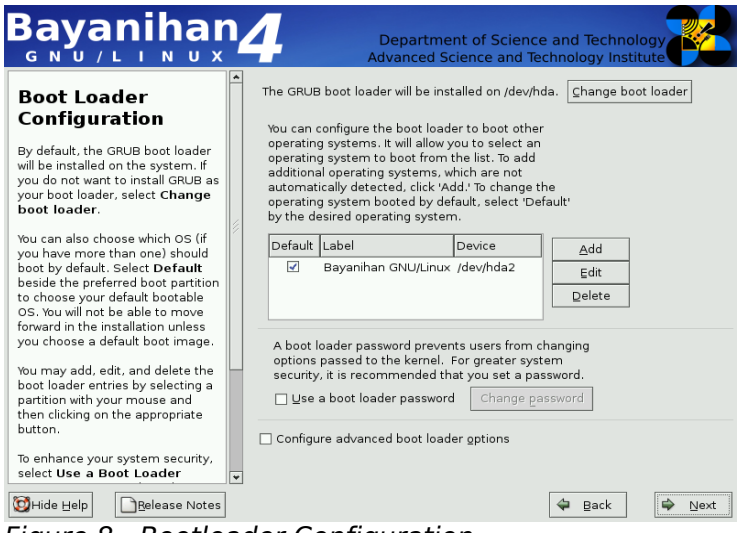
Disk Setup
Choose where you would like Bayanihan GNU/Linux to be installed.
If you do not know how to partition your system or if you need help with using the manual partitioning tools, refer to the product documentation.
If you used automatic partitioning, you can either accept the current partition settings (click Next), or modify the setup using the manual partitioning tool.
If you are manually partitioning your system, you will see your current hard drive(s) and partitions displayed below. Use the partitioning tool to add, edit, or delete partitions for your system.
Note, you must create a root (/)
Drive /dev/hda (5993 MB) (Model: QEMU HARDDISK)
New
Edit
Delete
Reset
RAID
LVM
Device
Mount Point/ RAID/Volume
Type
Format
Size (MB)
Start
End
Hard Drives
/dev/hda
/dev/hda1 /boot ext3 102 1 13
/dev/hda2 / ext3 5640 14 732
/dev/hda3 swap 251 733 764
Hide RAID device/LVM Volume Group members
Hide Help
Release Notes
Back
Next

Figure 7 - Partitioning Manually

6. The next step is to configure the bootloader for your system. You have the option to select whether Bayanihan Linux or other OS will be booted by default if there is another OS installed in your hard disk.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Advanced Science and Technology Institute
Boot Loader Configuration
By default, the GRUB boot loader will be installed on the system. If you do not want to install GRUB as your boot loader, select Change boot loader.
You can also choose which OS (if you have more than one) should boot by default. Select Default beside the preferred boot partition to choose your default bootable OS. You will not be able to move forward in the installation unless you choose a default boot image.
You may add, edit, and delete the boot loader entries by selecting a partition with your mouse and then clicking on the appropriate button.
To enhance your system security, select Use a Boot Loader
The GRUB boot loader will be installed on /dev/hda.
Change boot loader
You can configure the boot loader to boot other operating systems. It will allow you to select an operating system to boot from the list. To add additional operating systems, which are not automatically detected, click 'Add.' To change the operating system booted by default, select 'Default' by the desired operating system.
Default
Label
Device
Bayanihan GNU/Linux /dev/hda2
Add
Edit
Delete
A boot loader password prevents users from changing options passed to the kernel. For greater system security, it is recommended that you set a password.
Use a boot loader password
Change password
Configure advanced boot loader options
Hide Help
Release Notes
Back
Next

Figure 8 - Bootloader Configuration

7. The next step is to configure your network device. Bayanihan Linux will detect your network device if it has a driver for it. If your network is using a DHCP server, then select DHCP. If not, supply the IP address, gateway, submask, and DNS. If your computer is not connected to a network, uncheck "Active on Boot."

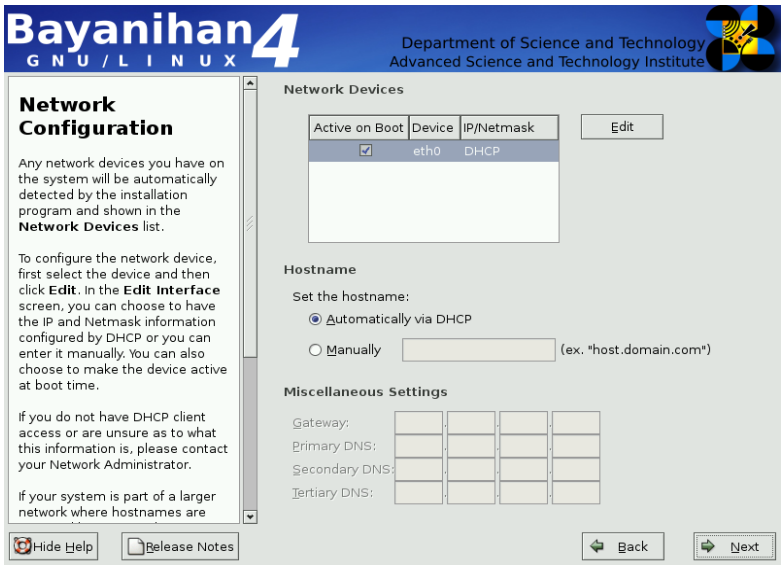

Bayanihan4
GNU/LINUX
Department of Science and Technology
Advanced Science and Technology Institute
Network Configuration
Any network devices you have on the system will be automatically detected by the installation program and shown in the Network Devices list.
To configure the network device, first select the device and then click Edit. In the Edit Interface screen, you can choose to have the IP and Netmask information configured by DHCP or you can enter it manually. You can also choose to make the device active at boot time.
If you do not have DHCP client access or are unsure as to what this information is, please contact your Network Administrator.
If your system is part of a larger network where hostnames are
Network Devices
Active on Boot
Device
IP/Netmask
Edit
eth0
DHCP
Hostname
Set the hostname:
Automatically via DHCP
Manually
(ex. "host.domain.com")
Miscellaneous Settings
Gateway:
Primary DNS:
Secondary DNS:
Tertiary DNS:
Hide Help
Release Notes
Back
Next

Figure 9 - Network Configuration

8. Select your local time zone by clicking your area on the map. The default location is set to Manila.

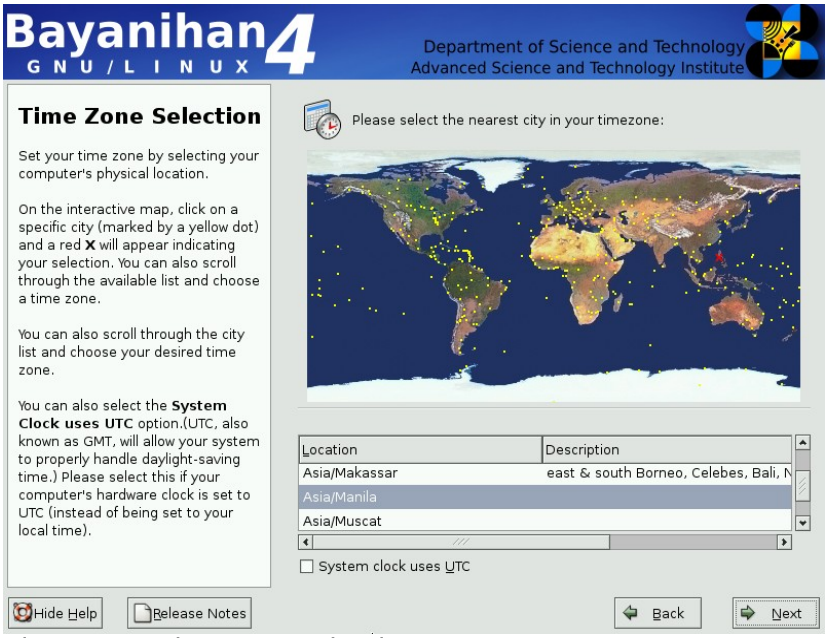
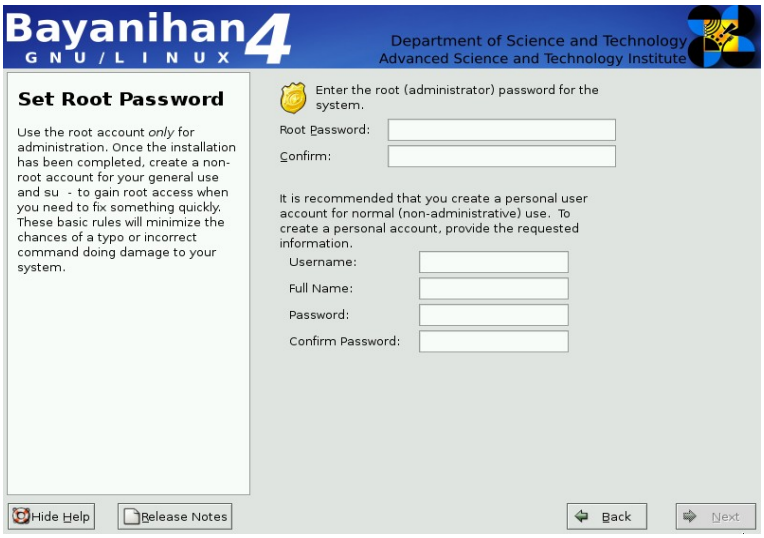

Bayanihan4
GNU/LINUX
Department of Science and Technology
Advanced Science and Technology Institute
Time Zone Selection
Set your time zone by selecting your computer's physical location.
On the interactive map, click on a specific city (marked by a yellow dot) and a red X will appear indicating your selection. You can also scroll through the available list and choose a time zone.
You can also scroll through the city list and choose your desired time zone.
You can also select the System Clock uses UTC option.(UTC, also known as GMT, will allow your system to properly handle daylight-saving time.) Please select this if your computer's hardware clock is set to UTC (instead of being set to your local time).
Please select the nearest city in your timezone:
Location
Description
Asia/Makassar
east & south Borneo, Celebes, Bali, N
Asia/Manila
Asia/Muscat
System clock uses UTC
Hide Help
Release Notes
Back
Next

Figure 10 - Timezone Selection

9. Supply the root password and type it again to confirm the password. The root password is very important since system-wide configurations are only possible using the root account. A separate system user account must also be created for normal use.


Bayanihan4
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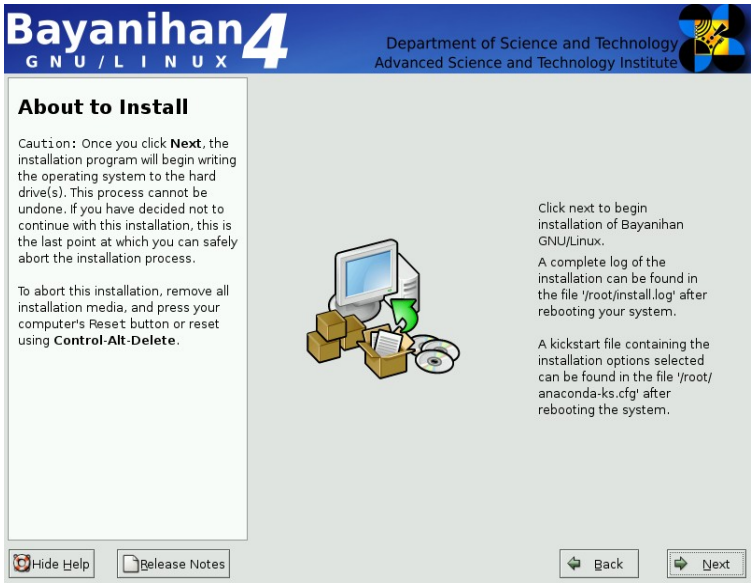
Advanced Science and Technology Institute
Set Root Password
Use the root account only for administration. Once the installation has been completed, create a non-root account for your general use and su - to gain root access when you need to fix something quickly. These basic rules will minimize the chances of a typo or incorrect command doing damage to your system.
Enter the root (administrator) password for the system.
Root Password:
Confirm:
It is recommended that you create a personal user account for normal (non-administrative) use. To create a personal account, provide the requested information.
Username:
Full Name:
Password:
Confirm Password:
Hide Help
Release Notes
Back
Next

Figure 11 - Root Password

10. The next screen is the confirmation screen. It is the step before the installation will commence. Make sure that all settings are correct before you click **Next** because the installer will write changes into your hard disk. You can still review and modify your settings by clicking **Back**.


Bayanihan4
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Advanced Science and Technology Institute
About to Install
Caution: Once you click Next, the installation program will begin writing the operating system to the hard drive(s). This process cannot be undone. If you have decided not to continue with this installation, this is the last point at which you can safely abort the installation process.
To abort this installation, remove all installation media, and press your computer's Reset button or reset using Control-Alt-Delete.
Click next to begin installation of Bayanihan GNU/Linux.
A complete log of the installation can be found in the file '/root/install.log' after rebooting your system.
A kickstart file containing the installation options selected can be found in the file '/root/anaconda-ks.cfg' after rebooting the system.
Hide Help
Release Notes
Back
Next

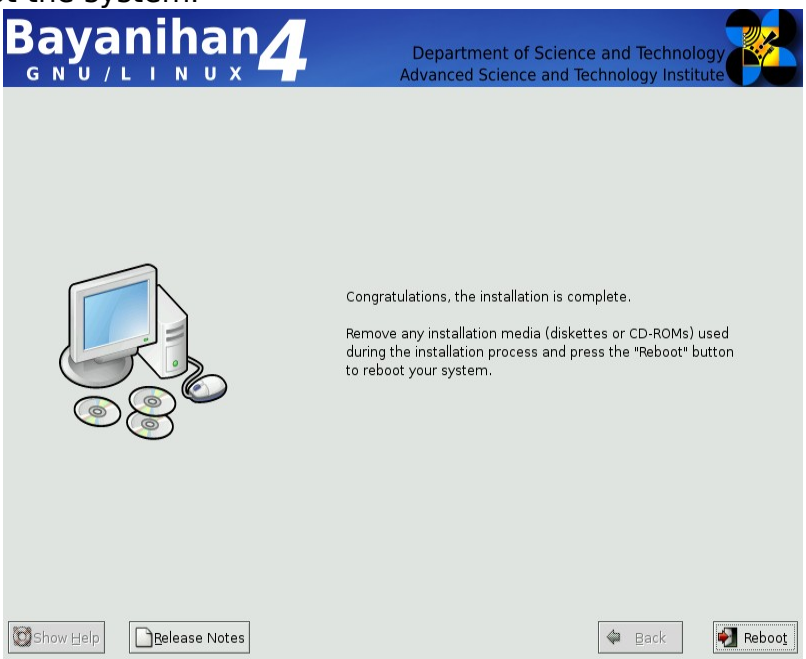
Figure 12 - About To Install

11. The next screen shows the start of the installation of Bayanihan Linux. This will take some time depending on your computer's speed.

Bayanihan 4
GNU/LINUX
Department of Science and Technology
Advanced Science and Technology Institute
Installing Packages
We have gathered all the information needed to install Bayanihan GNU/Linux on the system. It may take a while to install everything, depending on how many packages need to be installed.
Installing libxtst6-6.8.2.dfsg.1-6sarge1.i386 (356 KB)
X Window System event recording and testing extension library
Hide Help
Release Notes
Back
Next

Figure 13 - Installation

12. After installation, the installer will prompt the user to remove the installation media to reboot the system.


Bayanihan 4
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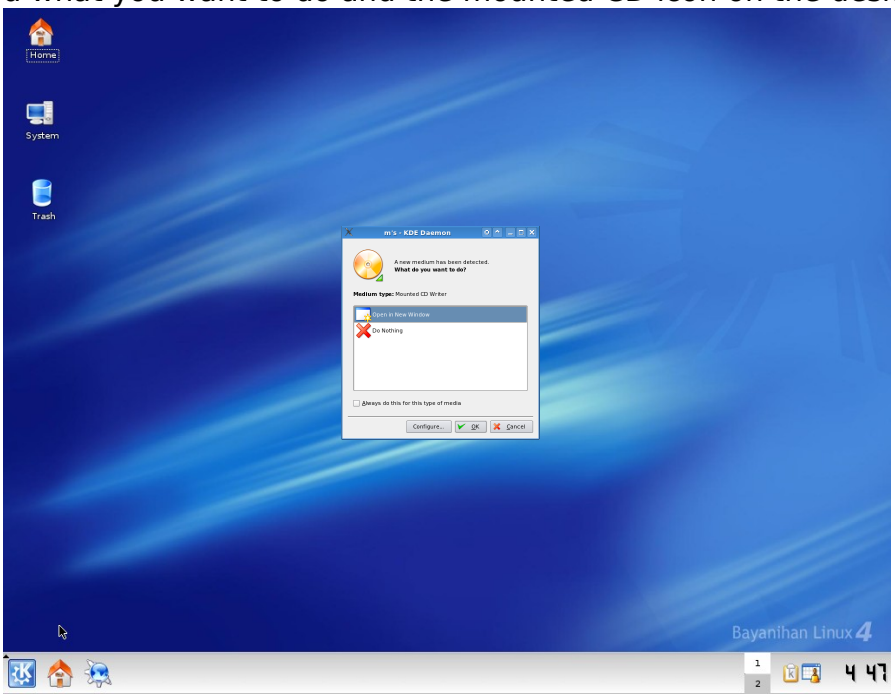
Department of Science and Technology
Advanced Science and Technology Institute
Congratulations, the installation is complete.
Remove any installation media (diskettes or CD-ROMs) used during the installation process and press the "Reboot" button to reboot your system.
Show Help
Release Notes
Back
Reboot

Figure 14 - Installation Complete

CHAPTER 3 - Frequently Asked Questions

How Do I Access My CD Drive?

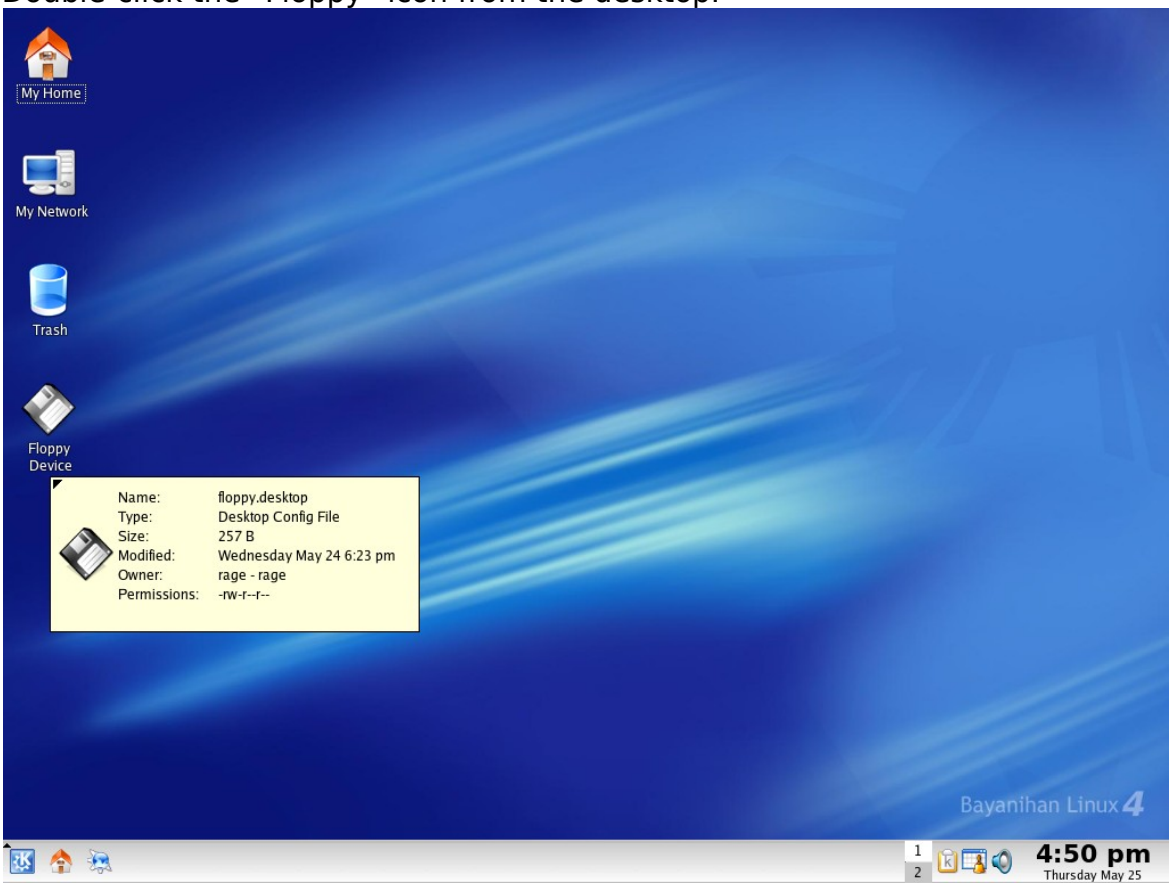
1. Inserting a CD into the drive will cause a dialog box to pop up on the desktop, asking you what you want to do and the mounted CD icon on the desktop.



2. The actions that you can do depends on the type of CD you inserted. You can play it if it is an audio or video CD, or open it in Konqueror if it is a data CD. Choose from the list and press the OK button.
3. If it is a data CD, it is mounted in /media/cdrom/.

How Do I Access My Floppy Drive?

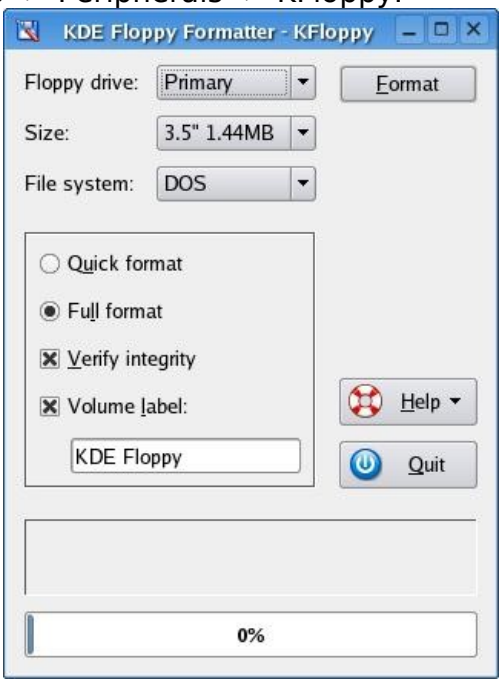
1. Double-click the “Floppy” icon from the desktop.



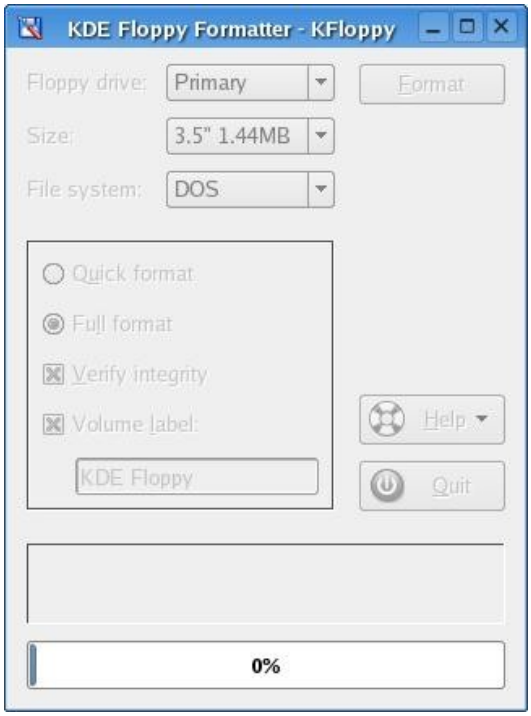
2. Usually, the link to your floppy disk is /media/floppy.

How Do I Format My Floppy Disk?

1. Select Start -> Utilities -> Peripherals -> KFloppy.

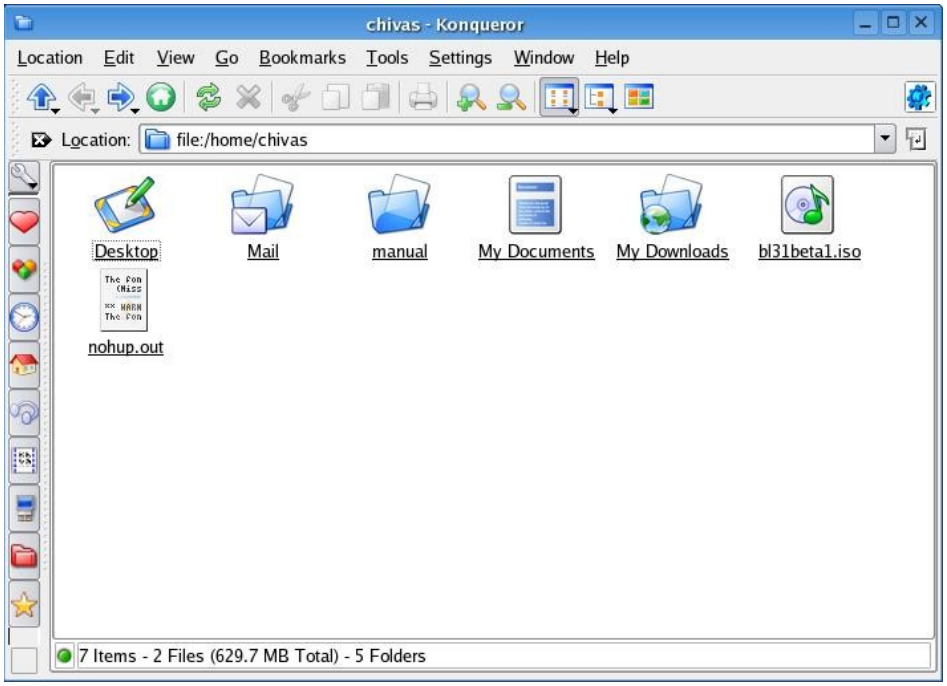


2. Click the “Format” button.

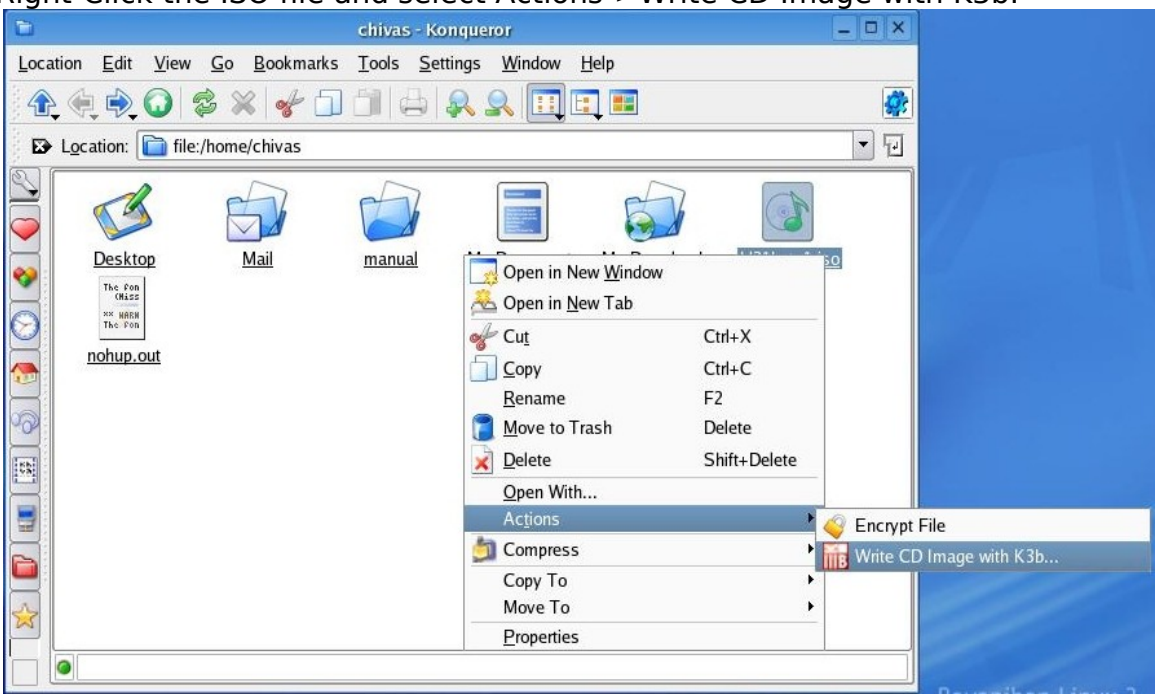


How Do I Burn An ISO Image?

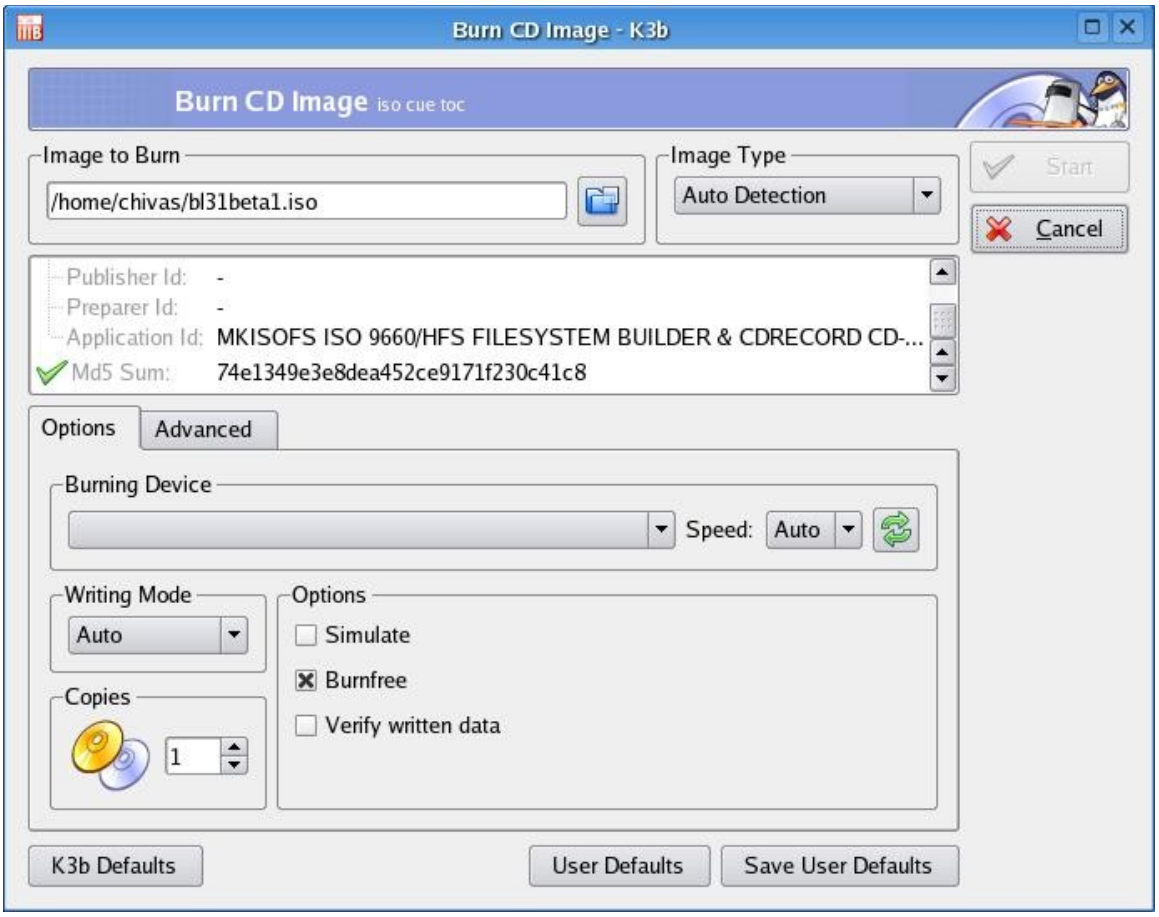
1. Select the ISO file to be burned.



2. Right-Click the ISO file and select Actions->Write CD Image with K3b.



3. Click the “Start” button.



How Do I Erase A Rewritable CD?

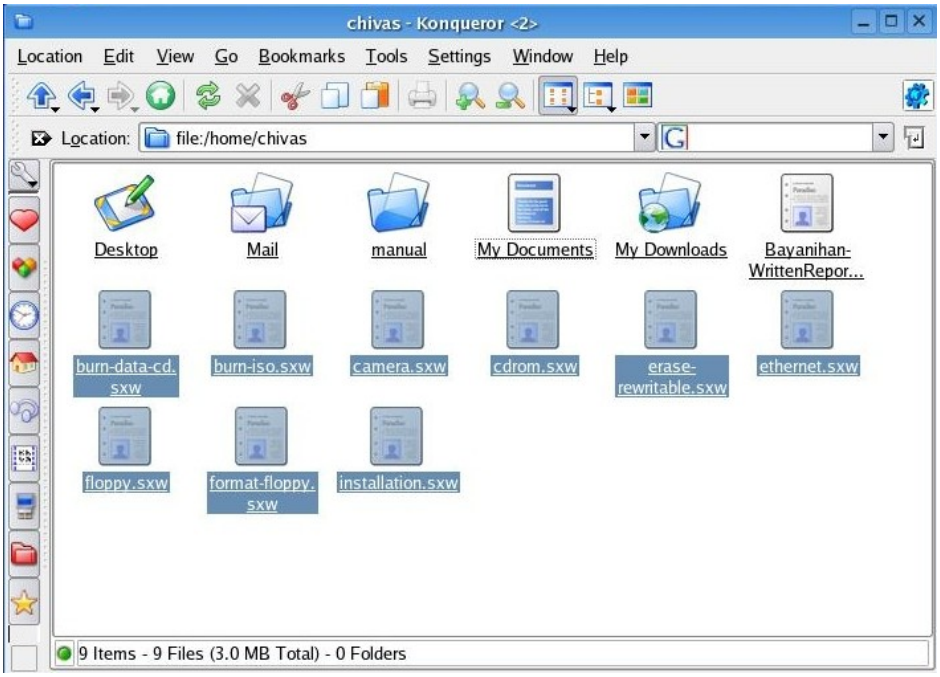
1. Select Start -> Multimedia-> K3b (CD & DVD Burning).

2. Select Tools->CD->Erase CD-RW.

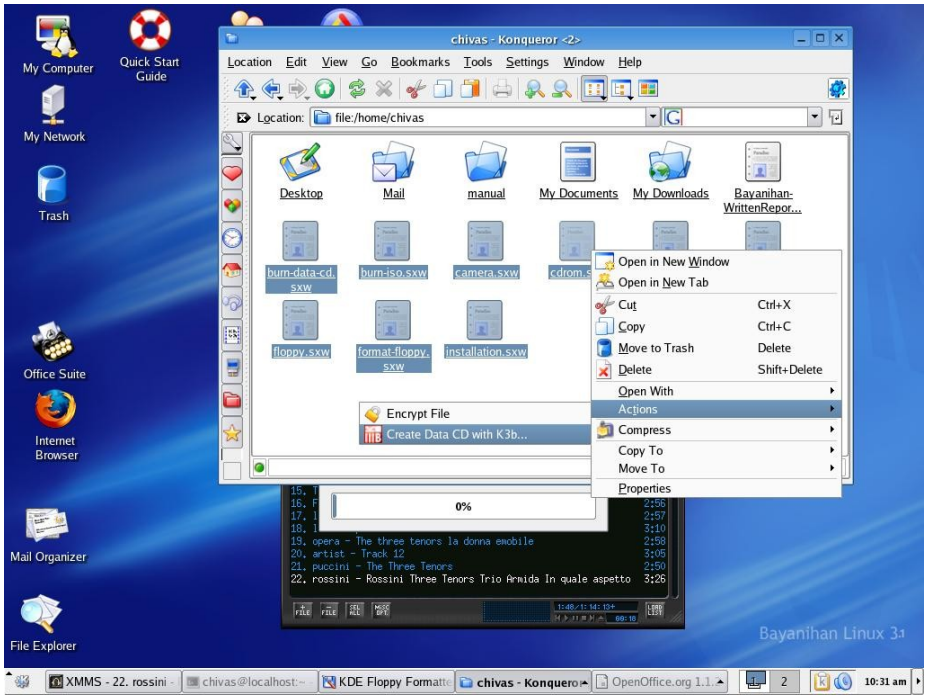
3. Click the “Start” Button.

How Do I Burn A Data CD?

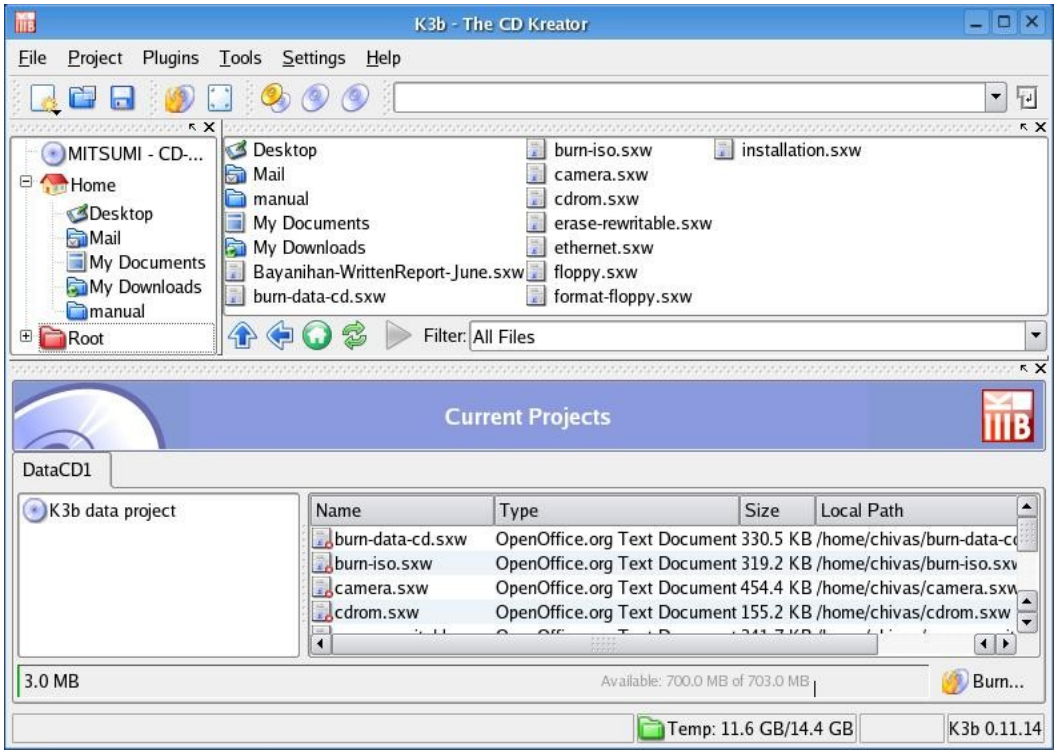
1. Select files and folders to be burned into the Data CD.



2. Right-click the selected items and select Actions->Create Data CD with K3b.



3. Click the “Burn” button.



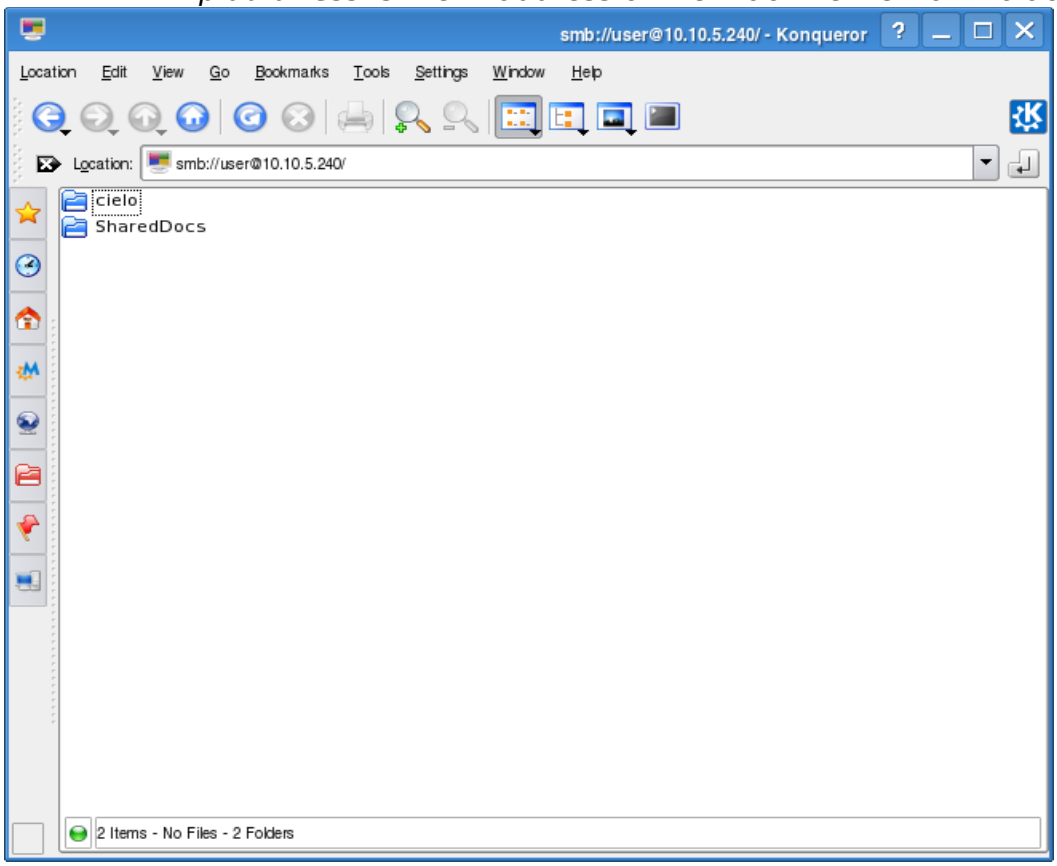
4. Click the “Burn” button.

How Do I Access Windows Shares?

1. Run Konqueror and type in the location bar the following:

smb://*user@ip.ad.dr.ess/*

wherein *user* is the username with access privileges to the share
ip.ad.dr.ess is the IP address of the machine we want to access


smb://user@10.10.5.240/ - Konqueror
Location Edit View Go Bookmarks Tools Settings Window Help
Location: smb://user@10.10.5.240/
cielo
SharedDocs
2 Items - No Files - 2 Folders

2. This will show up the shared folders on that machine. Click on the folder you want to view.

How Do I Play Movies?

a. PLAYING VCDs AND DVDs

Select Start->Multimedia->MPlayer (Movie Player).

b. PLAYING MOVIE FILES

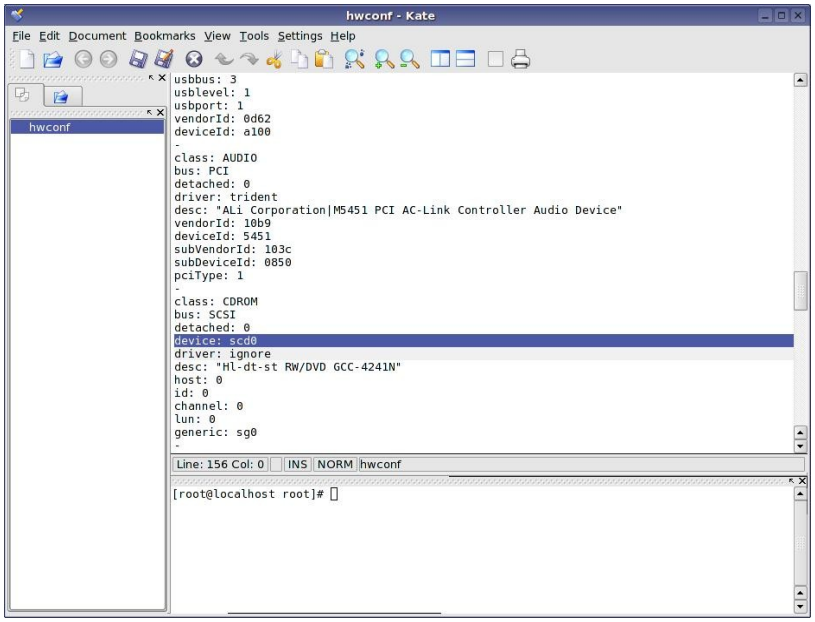
1. Right click on the movie screen and select Open ... -> Play file ...
2. Select a movie file you wish to play.
3. Click the play button.

c. PLAYING VCDs

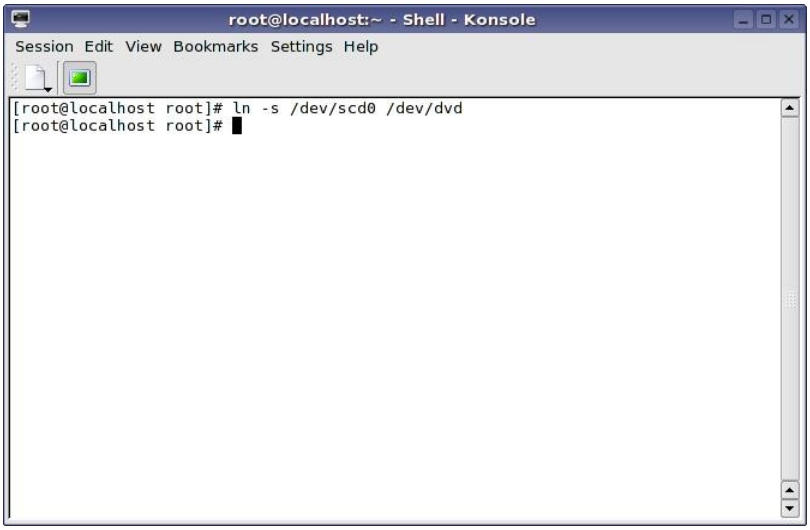
1. Insert your VCD in the CD-ROM drive.
2. Right click on the movie screen and select VCD -> Open disc ...

d. PLAYING DVDs

1. Login as root.
2. Select Bayanihan Applications->Utilities->Editors->KWrite.
3. From KWrite, select File -> Open and open /etc/sysconfig/hwconf
4. Look for the device entry that has “CDROM” as the class and “DVD” as the description. Once you see this entry, look for the device name, it should start with “scd” followed by a number. For example: scd0, scd1, scd2



5. Close KWrite without saving.
6. Select System Settings->Utiltities->Terminal Program.
7. From the terminal, create a symbolic link from /dev/dvd to your dvd device by typing: ln -s /dev/scdx /dev/dvd

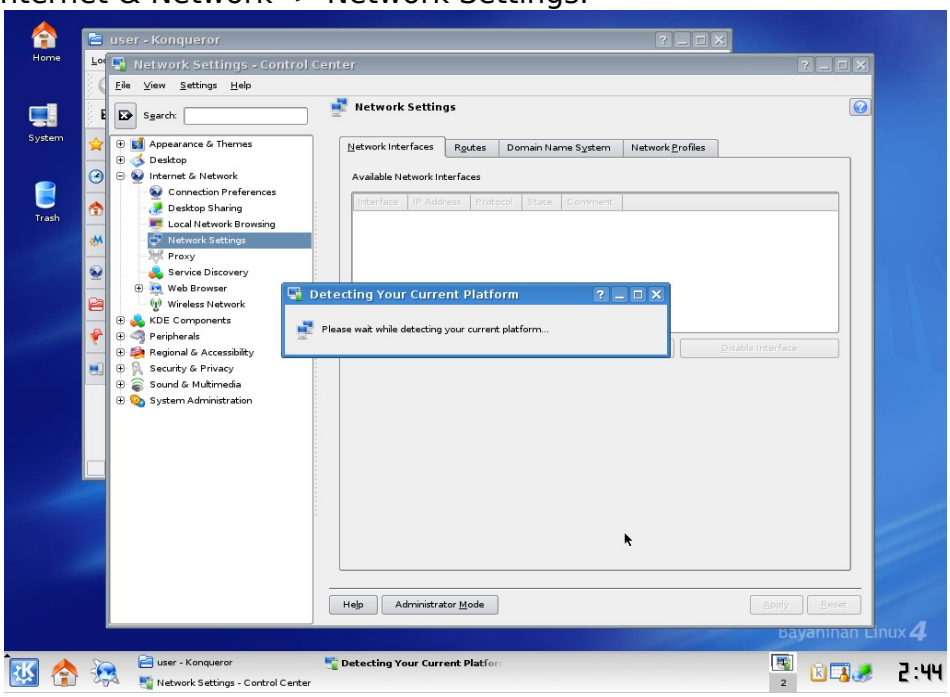

root@localhost:~ - Shell - Konsole
Session Edit View Bookmarks Settings Help
[root@localhost root]# ln -s /dev/scd0 /dev/dvd
[root@localhost root]#

NOTE: replace x with the device number listed in step 4

8. Close the terminal.
9. Insert a DVD in the DVD drive.
10. Right click on the movie screen and select DVD-> Open disc ...

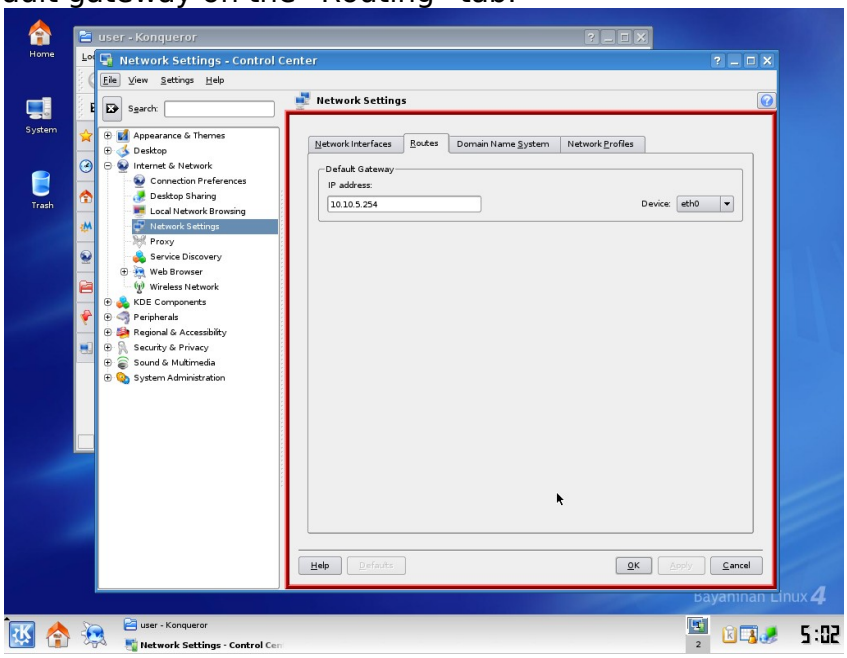
How Do I Configure An Ethernet Card?

1. Run the KDE Control Center.
2. Select Internet & Network -> Network Settings.

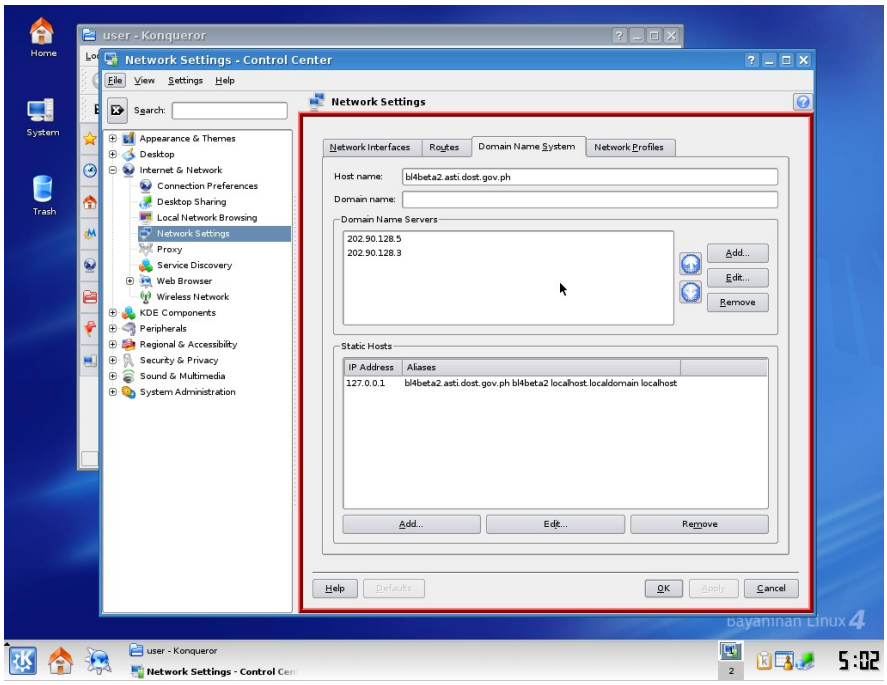


3. Click the “Administrator Mode” button and enter the root password on the dialogue box to configure and make system-wide changes.
4. After detection, select the device we want to configure then click “Configure Interface...”. We can set manually set the IP Address of the device or automatically through dhcp or bootp.

5. We can also set the broadcast and gateway by clicking the “Advanced Settings” button.
6. Set the default gateway on the “Routing” tab.

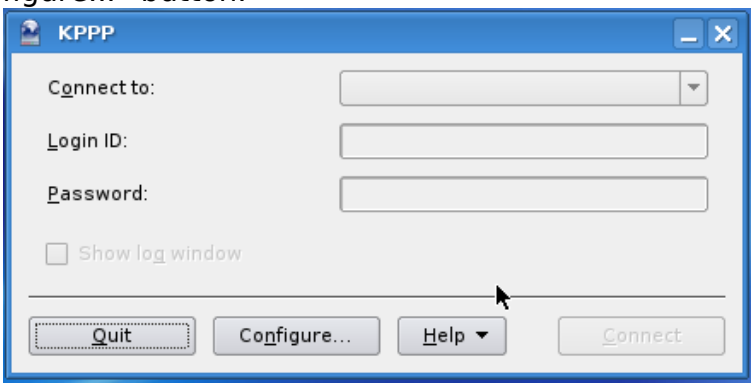


7. In the “Domain Name System”, we can set the host name, domain name, domain name servers, and the static hosts.



How Do I Configure A Modem?

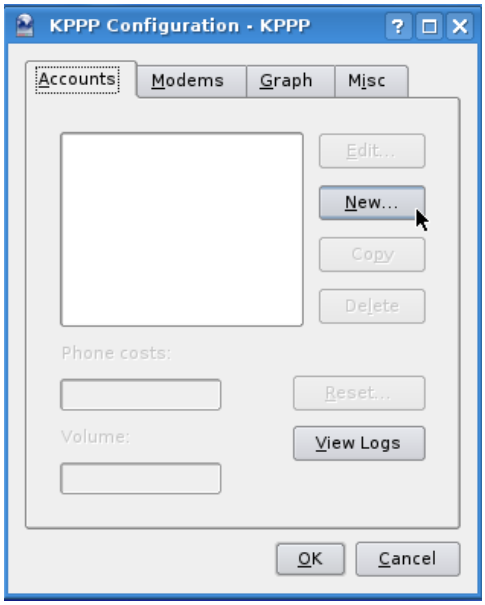
1. Select Internet -> KPPP (Internet Dial-Up Tool)
2. Click the “Configure...” button.



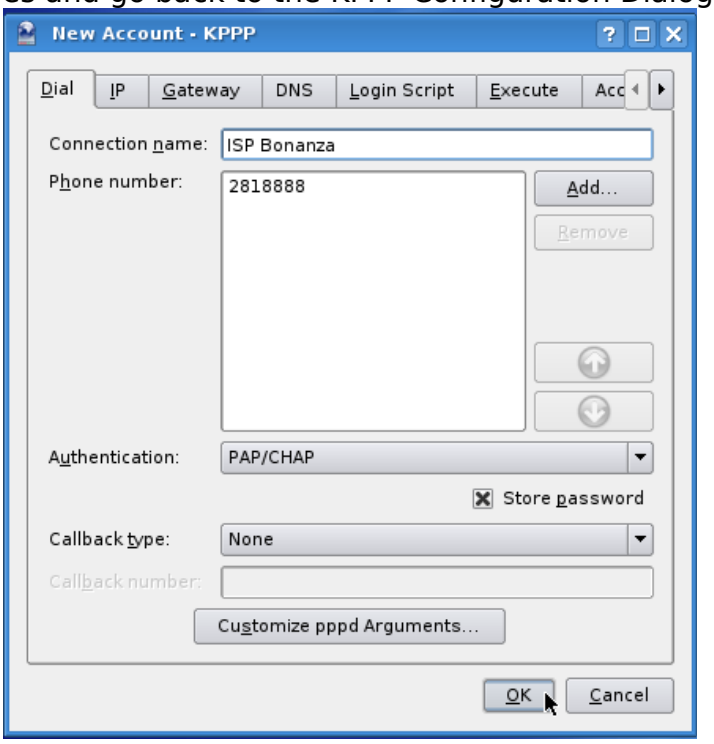
3. Click the “Manual Setup” button.

Create New Account - KPPP
Do you want to use the wizard to create the new account or the standard, dialog-based setup?
The wizard is easier and sufficient in most cases. If you need very special settings, you might want to try the standard, dialog-based setup.
Wizard
Manual Setup
Cancel

4. In the “Accounts” tab, click the “New...” button to add a new dial-up account.

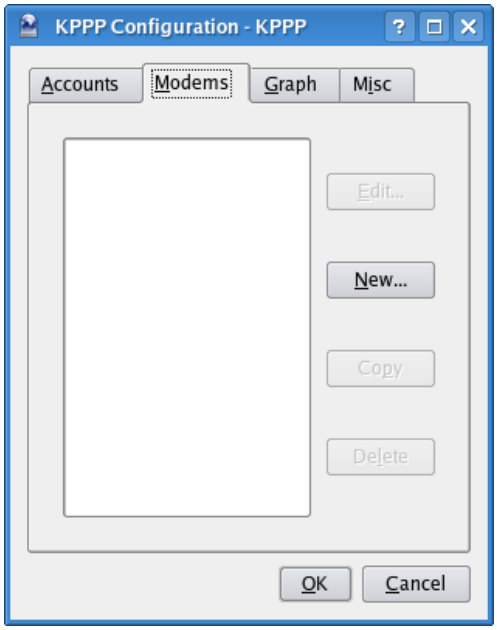


5. In the “Dial” tab, specify the name of your ISP provider and click the “Add” button to add the telephone numbers of your ISP. Once completed click “OK” to apply the changes and go back to the KPPP Configuration Dialog.

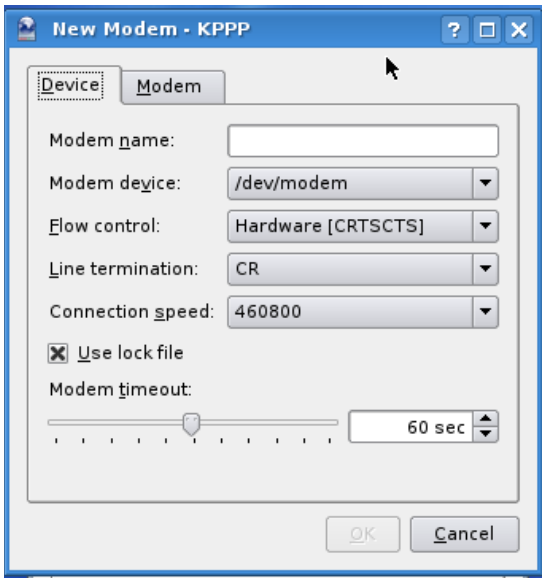


a. If your ISP provided a static IP address, click on the “IP” tab and specify the static IP address.
b. If your ISP provided a Gateway information, click on the “Gateway” tab and specify the gateway Information.
c. If your ISP provided a DNS information, click on the “DNS” tab and specify the dns information.

6. Select the “Modem” tab, and click the “New” button to configure your modem device.

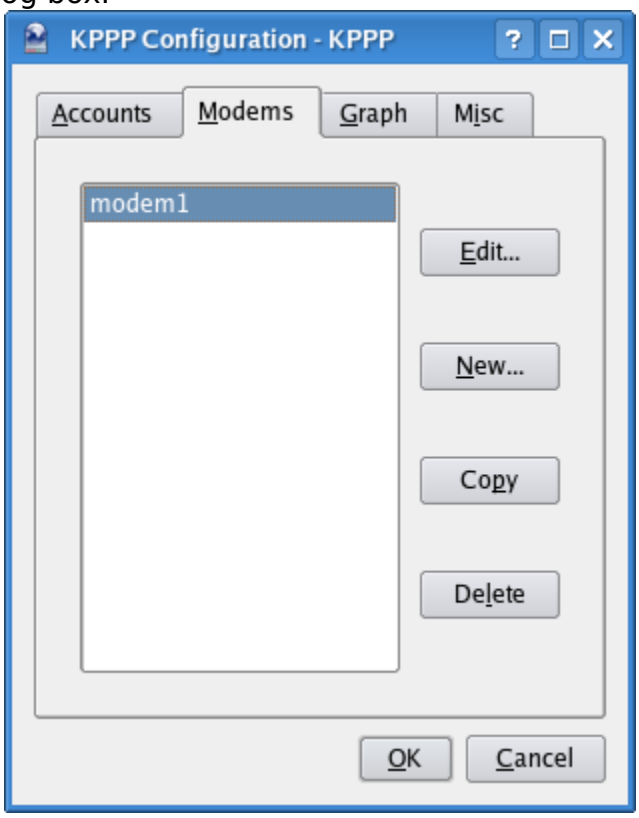


7. In the “Device” tab, specify the modem name that you wish to use and select the modem device. If you are using an external modem connected in the serial port of your computer, try selecting /dev/ttyS0 or /dev/ttyS1.

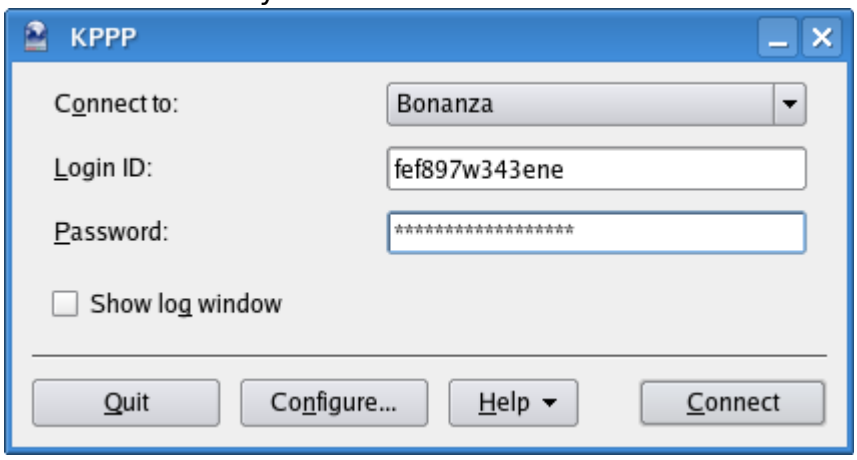


8. Click the “OK” button to apply the changes.

9. Check if everything is complete and correct then click “OK” to exit the KPPP Configuration Dialog box.

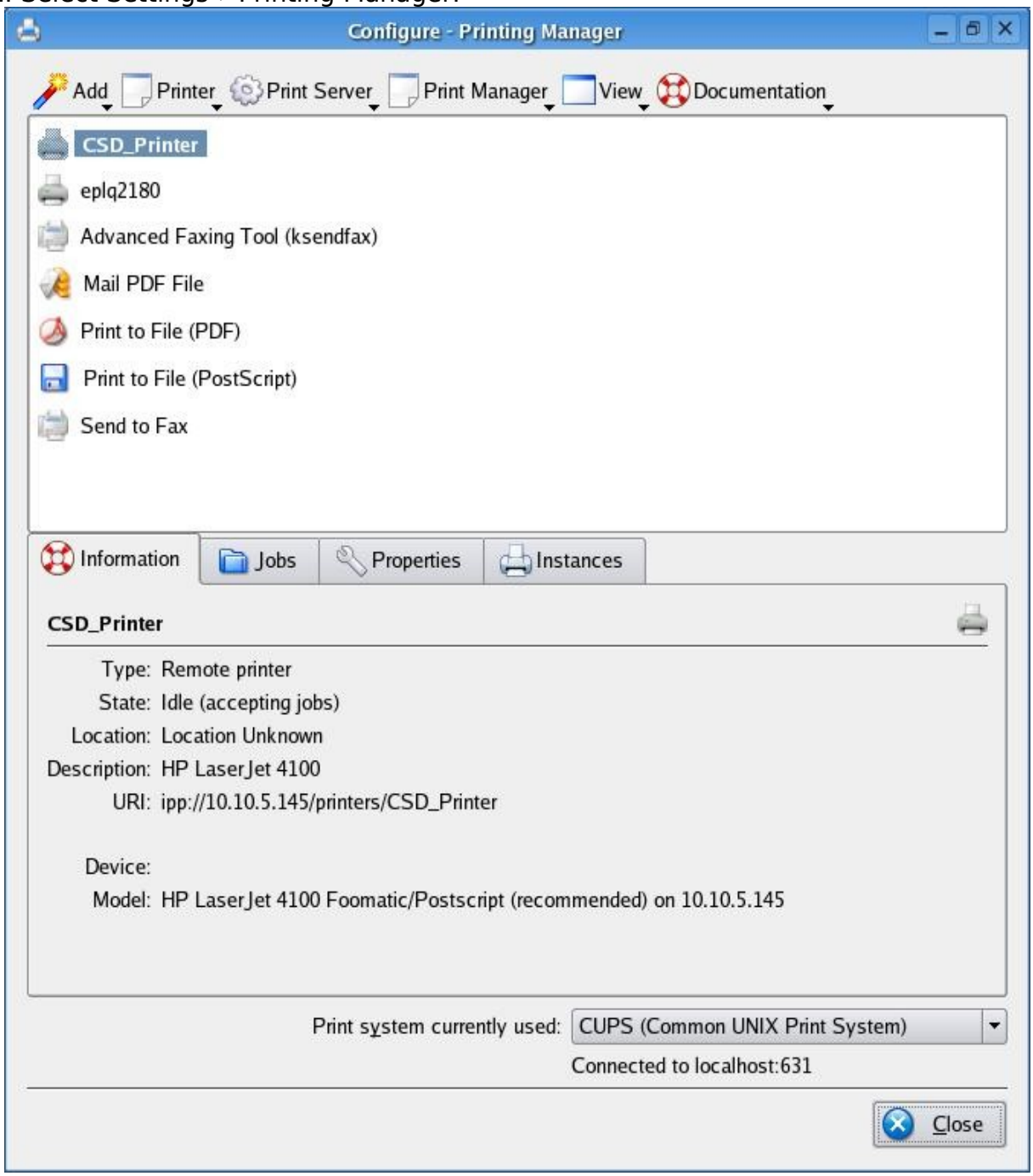


10. Click “Connect” to dial to your ISP and connect to the internet.

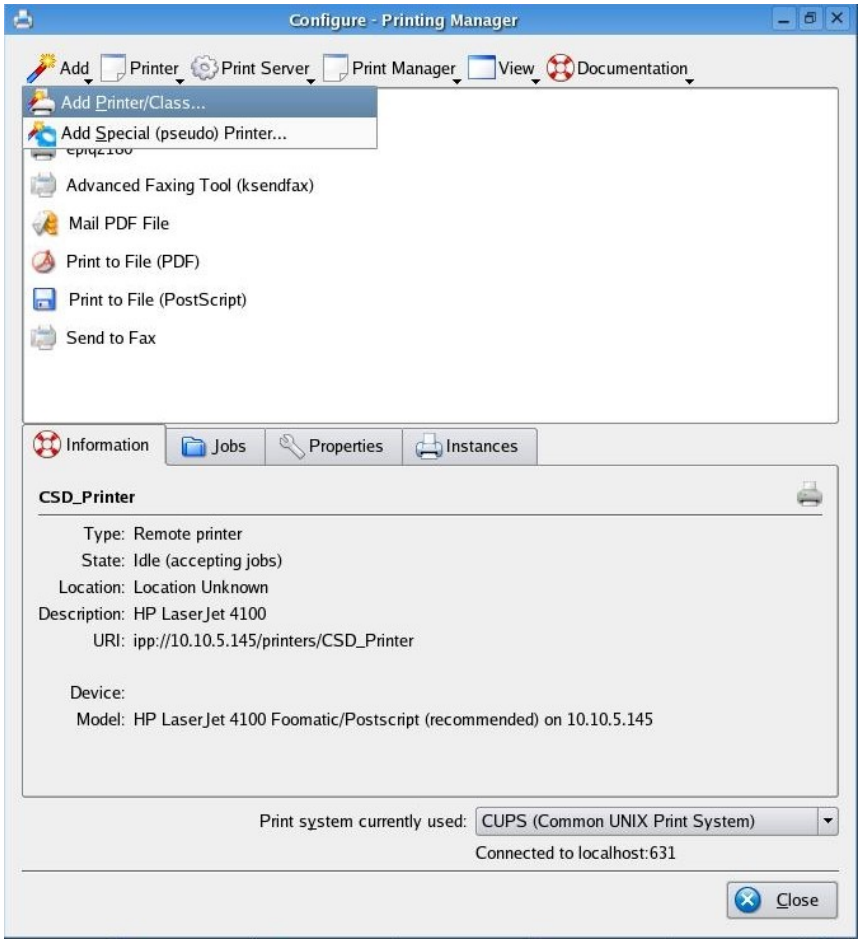


How Do I Configure A Printer?

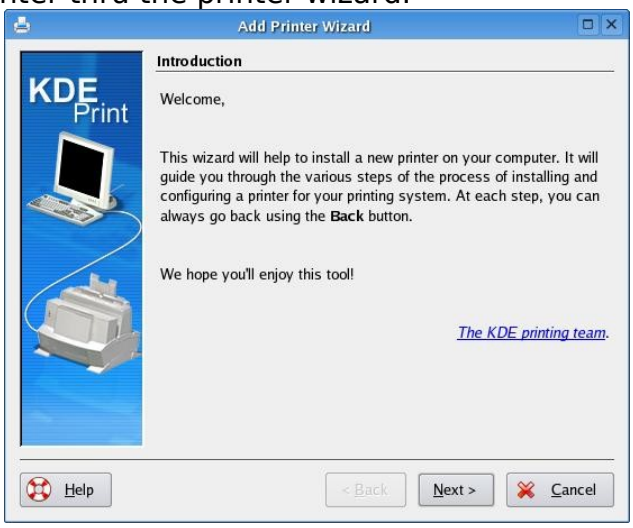
1. Select Settings->Printing Manager.



2. Select Add->Add Printer Class.

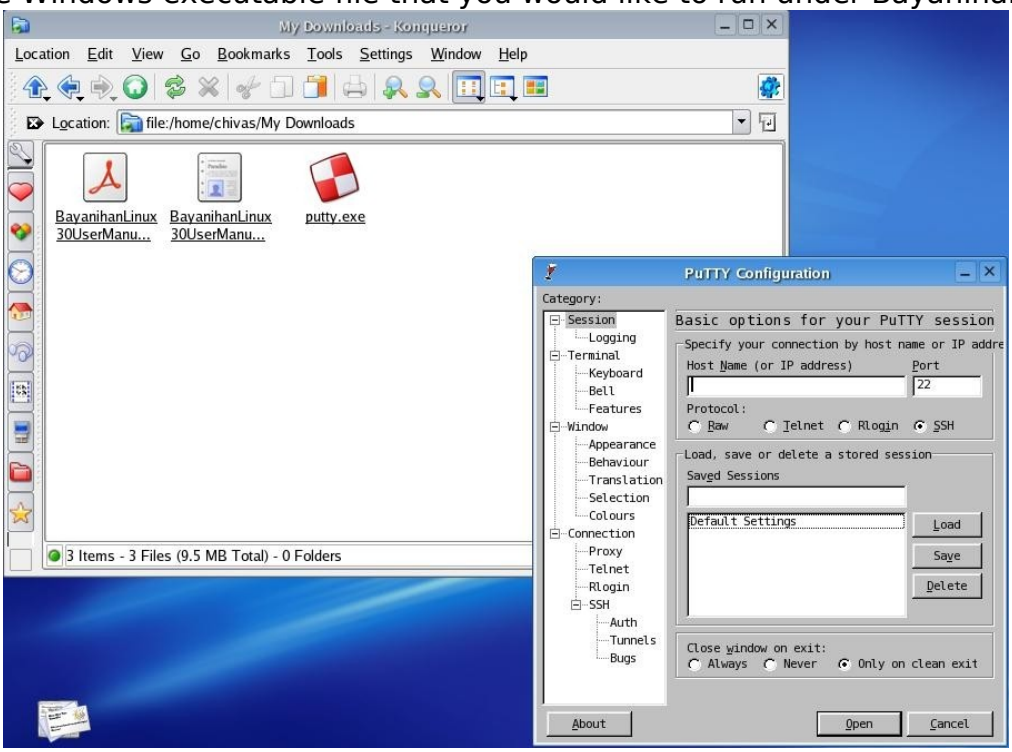


3. Configure your printer thru the printer wizard.


Add Printer Wizard
KDE Print
Introduction
Welcome,
This wizard will help to install a new printer on your computer. It will guide you through the various steps of the process of installing and configuring a printer for your printing system. At each step, you can always go back using the Back button.
We hope you'll enjoy this tool!
The KDE printing team.
Help
< Back
Next >
Cancel

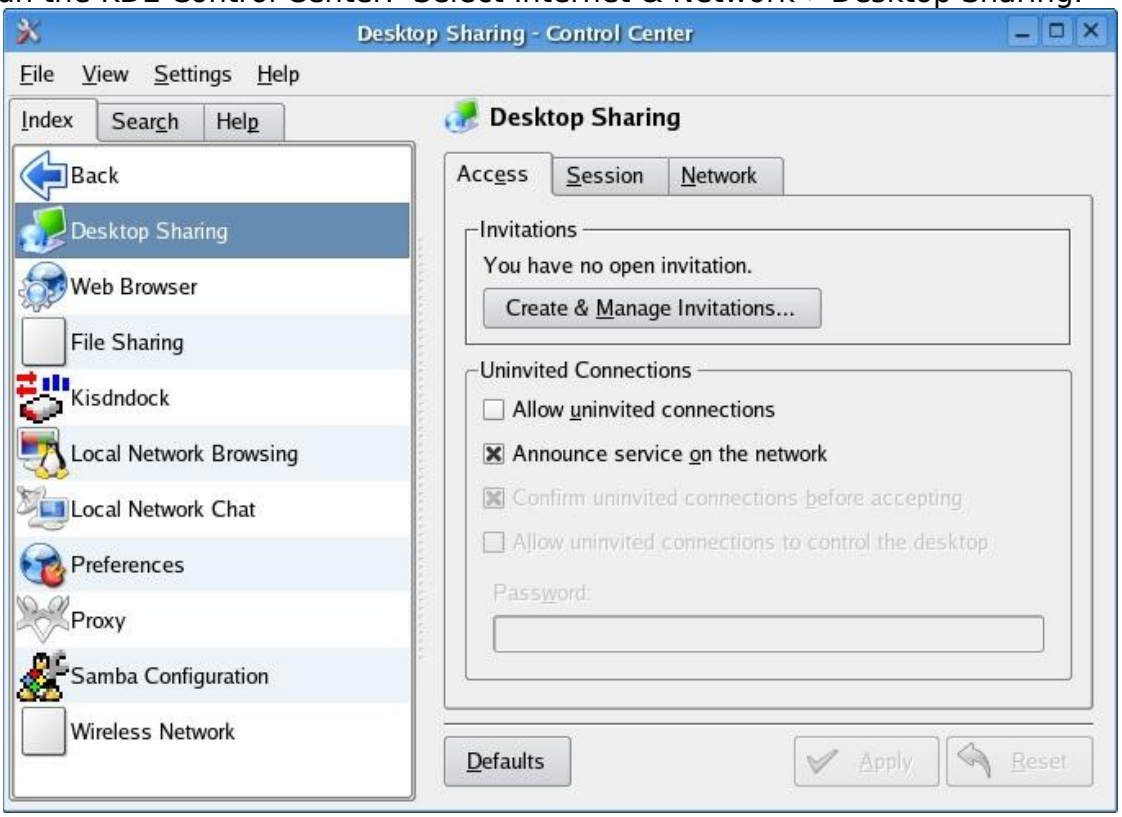
How Do I Run Windows Applications Thru WINE?

Click the Windows executable file that you would like to run under Bayanihan Linux.



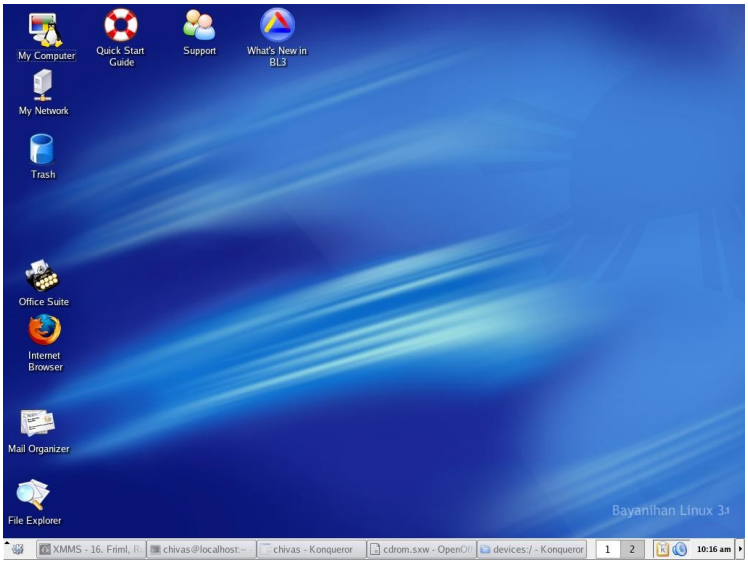
How Do I Setup My Computer For Desktop Sharing?

1. Run the KDE Control Center. Select Internet & Network->Desktop Sharing.

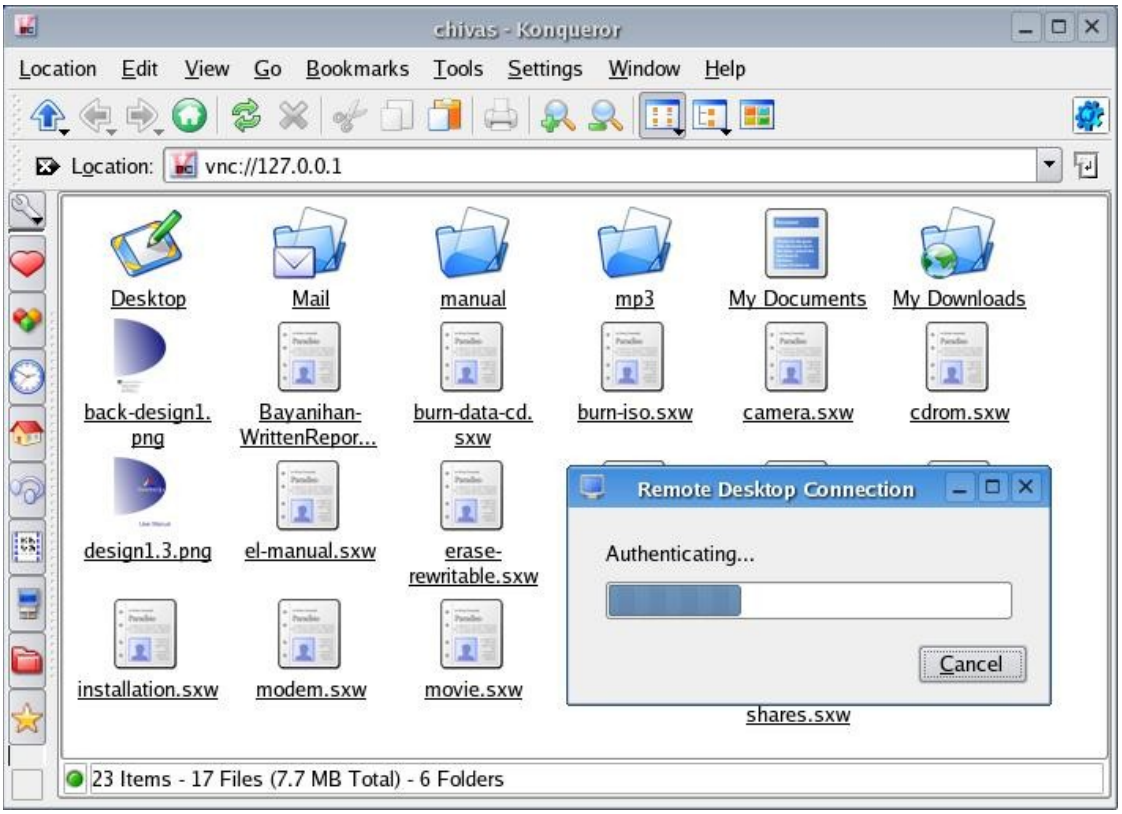


2. Check “Allow uninvited connections” and “Allow uninvited connections to control the desktop”. Click Apply. Your machine is now shareable.

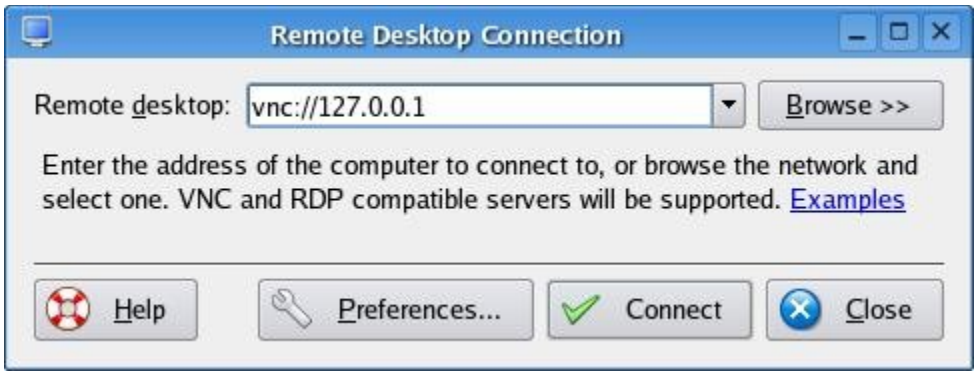
3. From the remote client, click the “File Explorer” icon from the desktop.



4. Type “vnc://” followed by the ip address of the computer you are going to connect to.



5. Click the “Connect” button.


Remote Desktop Connection
Remote desktop:
vnc://127.0.0.1
Browse >>
Enter the address of the computer to connect to, or browse the network and select one. VNC and RDP compatible servers will be supported. Examples
Help
Preferences...
Connect
Close

6. Accept the connection to allow the remote client to access your desktop.

New Connection - Desktop Sharing
Desktop Sharing
Attention
Somebody is requesting a connection to your computer. Granting this will allow the remote user to watch your desktop.
Remote system:
localhost.localdomain
Allow remote user to control keyboard and mouse
Accept Connection
Refuse Connection

APPENDIX

Contributors of Bayanihan Linux

Michael Poblete
A member of the Philippine Linux Users Group
Developer and collaborator of the Bayanihan Linux Users Group
Contributor of the customized Plastik theme and one of the GDM Kalawakan designers
Currently studying in Mapua Institute of Technology, Manila
Worked as a student assistant in ASTI with the Bayanihan Linux Team

Mark Achanzar
A member of the Philippine Linux Users Group
Contributor of the GDM Kalawakan Theme
Freelance developer and designer

Special thanks to the following individuals for their comments and suggestions:

Melvin Vivas
Founding president of the Pinoy Java Users Group (PinoyJUG) and still a member of PinoyJUG

Marvin Pascual
A member of the Philippine Linux Users Group who also works in BIR

Dr. Ernesto Damasco
An avid supporter of Bayanihan Linux since the start of the project

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Worked in ASTI as a Student Assistant

Loreto Casala
A Batangas Open Source Society (BOSS) member and future contributor for localization

Bert Te
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Emman Teodosio
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Eder Tan
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KD Tan
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Worked as a student assistant for the Bayanihan Linux team

Our sincere appreciation to the following professional individuals for testing our Beta release and providing us with feedback to improve Bayanihan Linux:

Ronald Tomimbang, A faculty in St. Francis of Assisi Academy
Jon Voltaire Pili, A linux enthusiast
Rufino Mananghaya, Director of the Development Management and Governance, UPLB
Resmon Gonzales, IT Administrator of Veritas Parochial School
Christopher Baluyut, a student of UE Caloocan City

We would also like to thank Serg's Cafe for providing a venue for our Developers' Meeting. To our forum members, enthusiastic supporters and critics, we thank you for making Bayanihan Linux possible.

Lastly, to the contributors that we failed to mention, thank you very much as well.

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Email: bayanihan@asti.dost.gov.ph
URL: http://www.bayanihan.gov.ph/
Forum: http://www.bayanihan.gov.ph

Text:
Format [BL your@email.com your message...]
Send to 2960

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	Mr. Reynaldo Callao
	Ms. Janice Carpo
	Ms. Katrina Murga
	Mr. Emmanuel Balintec
Course Developer:	Ms. Janice Ballesteros

Open Source Counterparts of Proprietary Software in Bayanihan Linux

PROPRIETARY SOFTWARE	*OPEN SOURCE SOFTWARE*
Internet Explorer	Mozilla Firefox, Konqueror Web Browser
Microsoft Word	OpenOffice.Org Writer
Microsoft Powerpoint	OpenOffice.Org Impress
Microsoft Excel	OpenOffice.Org Calc
Microsoft Outlook	Kontact
Roxio CD Creator	K3b
WinDVD	MPlayer
Microsoft Media Player	MPlayer, XMMS, KsCD
Adobe Photoshop	Gimp

Hardware Compatibility List

CPUs
Intel -- Pentium, Pentium Pro, Pentium II, Pentium II Xeon, Pentium III, Pentium III Xeon, Pentium IV, Pentium IV Xeon
Celeron
Athlon, Duron, Athlon XP, Athlon MP Cyrix - MII VIA - Cyrix MIII, C3

Video cards
3DFX -- Banshee, Voodoo3, Voodoo5
ATI -- Radeon Mobility M6, M7
Radeon 7000, 7500, 8500, 9000, 9700 (2D only), 9800 (2D only)
Rage 128, Rage 128 Mobility M3, M4
Rage 128 Pro, Rage 128 Pro Ultra, most Mach64-compliant cards
Intel -- i740, i810, i815, i830, i845G, i845GL Matrox -- Millenium, Millenium II, Mystique/220, G200, G400, G450, G550, NeoMagic -- 256AV, 256XL+, 256ZX, 128XD, 128, 128V, 128ZV, 128ZV+, NVIDIA (2D only) -- TNT, TNT2, GeForce 256, GeForce2 GTS, GeForce2 Go, GeForce2 MX, GeForce3, GeForce4, S3 -- Savage, SuperSavage, ViRGE, Trio64

SCSI controllers
Adaptec -- 200x, 21xx, 22xx, 27xx, 28xx, 29xx, 32xx, 34xx, 39xx, 54xx Advansys -- 940 (Ultra/Wide);
AMI -- MegaRAID Express 2000 (466 series) Dell -- PowerEdge RAID series;
IBM (Buslogic/Mylex) -- Flashpoint, MultiMaster, DAC-960;
Intel -- Vortex/GDT series;
LSI (Symbios) -- 53C875, 53C985, 53C1030;
QLogic -- QLA1280/2200/2300/12160

IDE controllers
ATA-133, ATA-33 -- most controllers. ATA-66 (not RAID) -- HighPoint 366/368, Intel 82801AB ICH0 (440BX), Promise PDC20262, PDC2027x, PDC20265/7 VIA 82c596B/686A. ATA-100 (no RAID) -- Highpoint 370, Intel 82801BA/82801DB ICH2/ICH4 (i8xx series), VIA 82c686B, nVidia nForce/nForce2; ATA RAID -- 3ware Escalade 3W -- 5xxx/6xxx/7xxx, Adaptec 2400A.

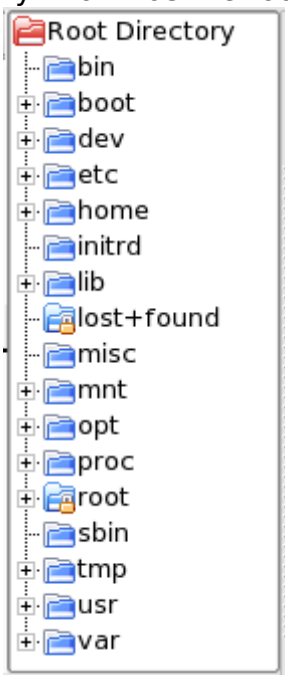
Network cards
3COM -- 3C905/B/C; D-Link -- DFE-530/+; Realtek -- RTL8029, RTL8139, RTL8139C+, RTL8169; IntelÑEtherExpress Pro 100/1000; Netgear -- FA310TX, FA311TX; Linksys -- LNE100TX; Silicon Integrated Systems -- SiS900; Intel -- DE4x5/Tulip series; GigE -- Broadcom Tigon3, Intel e1000, NatSemi NS83820, Realtek RTL8169 VIA - Rhine

Modems
100% Hayes-compatible internal and external serial modems with hardware UART. NOTE: WinModems, host-based, HCF-, HSP-, HSF-, controllerless, host-controlled, and soft modems are NOT supported.

Sound cards
C-Media -- CM8338/CM8738;
Creative Labs -- SoundBlaster 128 PCI, SoundBlaster Live!, SoundBlaster Live! Audigy;
Crystal -- CS428X/CS46XX;
ESS -- Maestro, Maestro2, Maestro3, Solo;
Ensoniq -- AudioPCI ES1370, ES1371;
Intel -- ICH, ICH2, ICH3, ICH4;
Yamaha -- YMF724, 74x, 754; VIA -- VIA82c686, VIA8233, VIA8235

Linux Directory Structure

The Bayanihan Linux Filesystem is based on a hierarchical directory structure. The base directory is the “/” or the root directory and it expands into subdirectories. In DOS/Windows, the directory structure is represented as C:, D:, etc. and there are subdirectories under those directories. Linux, on the other hand places all the subdirectories under one directory known as the root directory as shown below.



The root directory and the subdirectories under it have a particular purpose.

/	The / directory is the parent/main directory.
bin	The /bin directory contains programs used by user, admin and system
boot	The /boot directory contains the linux kernel, initial ram disk and bootloader information
dev	The /dev directory contains files that represent your system hardware
etc	The /etc directory contains system wide configuration files
home	The /home directory contains user files
initrd	The /initrd directory contains boot information
lib	The /lib directory contains library files used by both the system and the user
lost+found	The /lost+found directory contains files saved during failure
misc	The /misc directory contains miscellaneous files
mnt	The /mnt directory is the standard mount point for external filesystems such as floppies, cdroms, etc.
opt	The /opt directory contains third party software files
proc	The /proc directory is a virtual filesystem directory that contains information about system
root	The /root directory is the administrator's home directory
sbin	The /sbin directory contains programs used by the system administrator and system
tmp	The /tmp directory contains temporary files used by the system which are erased periodically
usr	The /usr directory contains programs, libraries for all user-related programs
var	The /var directory contains variable files suchs as system logs, web files, ftp files, print spools, database files, etc.

Shortcut Keys

Alt-Esc, Ctrl-Esc	Invoke the "Current Session" manager.
Alt-Tab, Alt-Shift-Tab	Traverse the windows on the current desktop.
Ctrl-Tab, Ctrl-Shift-Tab	Traverse the virtual desktops.
Ctrl-Alt-Esc	Destroy window mode.
Alt-F2	Execute command.
Alt-F3	Popup the window operation menu.
Alt-F4	Close active window.
Ctrl-F[1..8]	Switch to virtual desktop.

The One Page Linux Manual

A summary of useful Linux Commands

Version 3.0 May 1999 squadron@powerup.com.au

Starting and Stopping

shutdown -h now	Shutdown the system now and do not reboot
halt	Stop all the processes—same as above
shutdown -r 5	Shutdown the system for 5 minutes and reboot
shutdown -r now	Shutdown the system now and reboot
reboot	Stop all the processes and then reboot—same as above
startx	Start the X system

Accessing and mounting file systems

mount -t iso9660/dev/cdrom/mnt/cdrom	Mount the device cdrom and call it cdrom under the /mnt directory
mount -t msdos/dev/hdd/mnt/ddrive	Mount hard disk d as a msdos file system and call it ddrive under the /mnt directory
mount -t vfat/dev/hdal/mnt/cdrive	Mount hard disk a as a VFAT file system and call it cdrive under the /mnt directory
Umount/mnt/cdrom	Unmount the cdrom

Finding files and text within files

find / -name fname	Starting with the root directory, look for the file called fname
find / name “*fname*”	Starting with the root directory, look for the file containing the string fname
locate missingfilename	Find a file called missingfilename using the locate command—this assumes you have already used the command updatedb (see next)
updatedb	Create or update the database files on all file systems attached to the linux root directory
which missingfilename	Show the subdirectory containing the excutable file called missingfilename
grep textstringtofind / dir	Starting with the directory called dir, look for and list all files containing textstringtofind

The X window System

ls	List files in current directory using long format
ls -F	List files in current directory and indicate the file type
ls -laC	List files in current directory in long format and display in columns
rm name	Remove a file or directory called name

ls	List files in current directory using long format
rm -rf name	Kill off an entire directory and all it s include files and subdirectories
cp filename/home/dirname	Copy the file called filename to the /home/dirname directory
mv filename/home/dirname	Move the file called filename to the /home/dirname directory
cat filetoview	Display the file called filetoview
man -k keyword	Display the man pages containing keyword
more filetoview	Display the file called filetoview one page at a time, proceed to next page using spacebar
head filetoview	Display the first 10 linesof the file called filetoview
head -20 filetoview	Display the first 20 lines of the file called filetoview
tail filetoview	Display the last 10 lines of the file called filetoview
Tail -20 filetoview	Display the last 20 lines of the file called filetoview

Installing software for Linux

rpm -ihv name.rpm	Install the rpm package called name
rpm -Uhv name.rpm	Upgrade the rpm package called name
rpm -e package	Delete the rpm package called package
rpm -l package	List the files in the package called package
rpm -ql package	List the files and state the installed version of the package called package
rpm -i –force package	Reinstall the rpm package called name having deleted parts of it (not deleting using rpm -e)
tar -zxvf archive.tar.gz or tar - zxvf archive.tar.tgz	Decompress the files contained in the zipped and tarred archive called archive
./configure	Execute the script preparing the installed files for compiling

User Administration

adduser accountname	Create a new user called accountname
passwd accountname	Give accountname a new password
su	Log in as superuser from current login
exit	Stop being superuser an revert to normal user

Little known tips and tricks

ifconfig	List ip addresses for all devices on the machine
apropos subject	List manual pages for subject
usermount	Executes graphical application for mounting and unmounting file systems

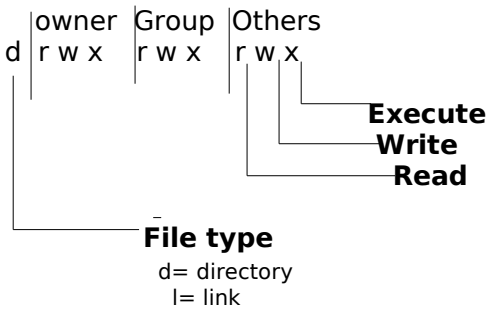
ifconfig	List ip addresses for all devices on the machine
/sbin/e2fsck hda5	Execute the filesystem check utility on partition hda5
fdformat/dev/fd0H1440	Format the floppy disk in devices fd0
tar -cMf/dev/fd0	Back-up the contents of the current directory and subdirectories to multiple floppy disks
tail -f/var/log/messages	Display the last 10 lines of the system log
cat/var/log/dmesg	Display the file containing the boot time messages—useful for locating problems. Alternatively, use the dmesg command
*	Wildcard –represents everything, e.g. cp from directory to the to directory
?	Single character wild card, eg. cp config.?/configs will copy all files beginning with the name config. in the current directory to the directory named configs.
[xyz]	Choice of character wildcards.eg. ls [xyz]* will list all files in the current directory starting with the letter x,y, or z.
linux single	At the lilo prompt, start in single user mode. This is useful if you have forgotten your passwd command.
pskill 123	List current processes
kill 123	Kill a specific process eg. kill 123

Configuration files and what they do

/etc/profile	System wide environment variables for all users
tc/fstab	List of all devices and their associated mount points. Edit this file to add cdroms, DOS, partitions and floppy drives at startup
/etc/motd	Message of the day broadcast to all users at login
/etc/rc.d/rc.local	Bash script that is executed at the end of the login process. Similar to autoexec.bat in DOS
/etc/HOSTNAME	Contains full hostname including domain
/etc/cron.*	There are 4 directories that automatically execute all scripts within the directory at intervals of hour, day, week, or month
/etc/hosts	A list of all known host names and IP addresses on the machine
/etc/http/conf	Parameters for the Apache web server
/etc/iniitab	Specifies and run level that the machine should boot into
/etc/resolve.conf	Defines IP addresses of DNS servers
/etc/smb.conf	Config file for the SAMBA server. Allows file and print sharing with Microsoft clients
~/.Xdefaults	Define configuration for some x-applications. ~refers to some user s home directory

/etc/profile	System wide environment variables for all users
/etc/Xll/Xf86Config	Config file for X-Windows
~/.xinitrc	Defines the windows manager loaded by X. ~ refers to user s home directory

File permissions



if the command ls -l is given, a long list of file names is displayed. The first column in this list details the permissions to the file. If permission is missing for a owner, group of other, it is represented by -eg. drwxr-x x

Read = 4	File permissions are altered by giving the chmod command and the appropriate octal code for each user type.
Write = 2	File permissions are altered by giving the chmod command and the appropriate octal code for each user type.
Execute = 1	Chmod 7 6 4 filename will make the file called filename R+W+X for the owner, R+W for the group and R for others.
chmod 7 5 5	Full permission for the owner, read and execute access for the group and others
Chmod +x filename	Make the file called filename executable to all users

X ShortCuts – (mainly for Redhat)

Control | Alt + or -	Increase or decrease the screen resolution. eg. from 640x480 to 800x600
Alt | escape	Display the list of active windows
Shift | Control F8	Resize the selected window
Right click on desktop background	Display menu
Shift | Control Altr	Refresh the screen
Shift | Control Altx	Start an xterm session

Printing

/etc/rc.d/init.d/lpd start	Start the print daemon
/etc/rc.d/init.d/lpd stop	Stop the print daemon

/etc/rc.d/init.d/lpd start	Start the print daemon
/etc/rc.d/init.d/lpd status	Display status of the print daemon
lprm	Display jobs in print queue
lpr	Print a file
lpc	Printer control file
man subject | lpr	Print the manual page called subject as plain text
man subject | lpr	Print the manual page called subject as Postscript output
printtool	Start X printer setup interface

Glossary Of Terms

Boot Loader	A small program that places the operating system (OS) of a computer into memory. Also called a boot manager.
Console	see Shell.
Debian	A Linux distribution. A free operating system (OS) for your computer.
DHCP	Dynamic Host Configuration Protocol; A protocol for assigning dynamic IP addresses to devices on a network.
DNS	Domain Name System (or Service or Server); An Internet service that translates domain names into IP addresses.
ISP	Internet Service Provider; A company that provides access to the Internet.
ISO image	(.iso) An informal term for a disk image of an ISO 9660 file system.
KDE	K Desktop Environment; A powerful Free Software graphical desktop environment for Linux and Unix workstations.
KPPP	K Point to Point Protocol. The KDE Internet Dialer.
MBR	Master Boot Record, a small program that is executed when a computer boots up.
Partition	(v.) To divide memory or mass storage into isolated sections.
Propiertary	A commercial product.
Protocol	The special set of rules that end points in a telecommunication connection use when they communicate
RAM	Random Access Memory; A type of computer memory that can be accessed randomly. Also referred to as the Physical Memory.
Routing	The process of moving a packet of data from source to destination.
Samba	An open source implementation of the SMB file sharing protocol that provides file and print services to SMB/CIFS clients.
SMB	Server Message Block, a message format used by DOS and Windows to share files, directories and devices.
Shell	The outermost layer of a program. Another term for user interface. (command shell); A shell is the command processor interface.
USB	Universal Serial Bus, an external bus standard that supports data transfer rates of 12 Mbps. A single USB
VGA	Video Graphics Array; A graphics display system for PCs.

VNC	Virtual Network Computing; Makes possible to interact with a computer from any computer or mobile device on the Internet.
WINE	An Open Source implementation of the Windows API on top of X and Unix.

Resources

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